

<u>NEWS</u>	<u>1</u>	Web Page URLs for STN Seminar Schedule - N. America
<u>NEWS</u>	<u>2</u>	"Ask CAS" for self-help around the clock
<u>NEWS</u>	<u>3</u>	EXTEND option available in structure searching
<u>NEWS</u>	<u>4</u>	Polymer links for the POLYLINK command completed in REGISTRY
<u>NEWS</u>	<u>5</u>	New UPM (Update Code Maximum) field for more efficient patent SDIs in CAplus
<u>NEWS</u>	<u>6</u>	CAplus super roles and document types searchable in REGISTRY
<u>NEWS</u>	<u>7</u>	Additional enzyme-catalyzed reactions added to CASREACT
<u>NEWS</u>	<u>8</u>	ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG, and WATER from CSA now available on STN(R)
<u>NEWS</u>	<u>9</u>	BEILSTEIN enhanced with new display and select options, resulting in a closer connection to BABS
<u>NEWS</u>	<u>10</u>	BEILSTEIN on STN workshop to be held August 24 in conjunction with the 228th ACS National Meeting
<u>NEWS</u>	<u>11</u>	IFIPAT/IFIUDB/IFICDB reloaded with new search and display fields
<u>NEWS</u>	<u>12</u>	CAplus and CA patent records enhanced with European and Japan Patent Office Classifications
<u>NEWS</u>	<u>13</u>	STN User Update to be held August 22 in conjunction with the 228th ACS National Meeting
<u>NEWS</u>	<u>14</u>	The Analysis Edition of STN Express with Discover! (Version 7.01 for Windows) now available
<u>NEWS</u>	<u>15</u>	Pricing for the Save Answers for SciFinder Wizard within STN Express with Discover! will change September 1, 2004
<u>NEWS EXPRESS</u>		JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
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FULL ESTIMATED COST

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FILE COVERS 1907 - 18 Aug 2004 VOL 141 ISS 8
 FILE LAST UPDATED: 17 Aug 2004 (20040817/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s metal oxide and dispersion

1508771 METAL
 770192 METALS
 1832030 METAL
 (METAL OR METALS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 85714 METAL OXIDE
 (METAL(W) OXIDE)
 302317 DISPERSION
 53606 DISPERSIONS
 326071 DISPERSION
 (DISPERSION OR DISPERSIONS)

L1 2529 METAL OXIDE AND DISPERSION

=> s l1 and surfactant

161196 SURFACTANT
 144701 SURFACTANTS
 204329 SURFACTANT
 (SURFACTANT OR SURFACTANTS)

L2 118 L1 AND SURFACTANT

=> s (oleic acid or dodecylbenzene sulfonic acid)

58725 OLEIC
 1 OLEICS
 58725 OLEIC
 (OLEIC OR OLEICS)
 3856606 ACID
 1442389 ACIDS
 4325713 ACID
 (ACID OR ACIDS)
 51102 OLEIC ACID
 (OLEIC(W) ACID)
 2668 DODECYLBENZENE
 28 DODECYLBENZENES
 2682 DODECYLBENZENE
 (DODECYLBENZENE OR DODECYLBENZENES)
 69953 SULFONIC
 20 SULFONICS
 69967 SULFONIC
 (SULFONIC OR SULFONICS)
 3856606 ACID
 1442389 ACIDS
 4325713 ACID
 (ACID OR ACIDS)
 324 DODECYLBENZENE SULFONIC ACID
 (DODECYLBENZENE(W) SULFONIC(W) ACID)

L3 51419 (OLEIC ACID OR DODECYLBENZENE SULFONIC ACID)

=> s 12 and 13
 L4 . . . 2 L2 AND L3

=> d 14 1-2 all

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 2003:570991 CAPLUS
 DN 139:135883
 ED Entered STN: 25 Jul 2003
 TI Additive to lubrication oils containing colloidal calcium carbonate
 IN Kaibaldin, Konstantin Arturovich; Sukhoverkhov, Viktor Dmitrievich
 PA Ukraine
 SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DT Patent
 LA Russian
 IC ICM C07F009-17
 ICS C07F009-18; C01F011-18; C10M141-10; B01F017-14; C10M125-10;
 C10M137-10
 CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 29, 66

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>PI</u> WO 2003059920	A1	20030724	WO 2002-UA17	20020425
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
<u>PRAI</u> UA 2001-129189	A	20011228		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003059920	ICM	C07F009-17
	ICS	C07F009-18; C01F011-18; C10M141-10; B01F017-14; C10M125-10; C10M137-10

AB The invention relates to methods for producing additives to lubrication oils and to lubrication oils contg. such additives. To produce the colloidal **dispersions** of carbonate of alkali-earth metals, a compn. having a general formula (1), which is disclosed in the formula of the invention, is used. Said compn. is produced by the interaction of dialkyldithiophosphate and/or zinc dialkylaryldithiophosphate with oxide or hydroxide of alk.-earth metal in a hydrocarbon solvent medium and water at 20-75° during 0.5-1 h. To produce the colloidal **dispersion** of an alk.-earth metal in oil, one or several surface-active substances are mixed in mineral oil and a hydrocarbon solvent with one or several compns. of the formula (1) in a quantity of 5-50% of a reaction mixt., oxide or hydroxide of alk.-earth metal and water, the thus obtained mixt. being treated by carbon dioxide at 20-75° during 0.5-1 h. In the other method, a surface-active substance is mixed with dialkyldithiophosphate and/or zinc dialkylaryldithiophosphate in a quantity of 5-50% of a reaction mixt., oxide or hydroxide of alk.-earth metal in the medium of a mineral oil, hydrocarbon solvent and water, the thus obtained mixt. being treated by carbon dioxide at 20-75° during 0.5-1 h. Said colloidal **dispersions** are used as additives to lubrication oils at a ratio of 2-15%. Said invention makes it possible to reduce the prodn. costs of the

ST additives and oils and improves the functional characteristics thereof.

IT . additive lubricating oil zinc dithiophosphate calcium carbonate colloidal dispersion

IT Carbonation

Colloids

Lubricating oil additives

Surfactants

 (additive to lubrication oils contg. colloidal calcium carbonate)

IT Hydrocarbon oils

 RL: NUU (Other use, unclassified); USES (Uses)

 (additive to lubrication oils contg. colloidal calcium carbonate)

IT Alkaline earth hydroxides

 RL: RCT (Reactant); RACT (Reactant or reagent)

 (additive to lubrication oils contg. colloidal calcium carbonate)

IT Alkaline earth oxides

 RL: RCT (Reactant); RACT (Reactant or reagent)

 (additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oil additives

 (antioxidants; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oil additives

 (antiwear; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oils

 (base oils, M-11, SAE-20W30, SAE-30; additive to lubrication oils contg. colloidal calcium carbonate)

IT Sulfonic acids, uses

 RL: MOA (Modifier or additive use); USES (Uses)

 (calculus salts; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oil additives

 (corrosion inhibitors; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oils

 (crankcase; additive to lubrication oils contg. colloidal calcium carbonate)

IT Stabilizing agents

 (lubricating oil additives; additive to lubrication oils contg. colloidal calcium carbonate)

IT Phenols, uses

 RL: MOA (Modifier or additive use); USES (Uses)

 (metal salts, alkyl-, alk. earth metal salts; additive to lubrication oils contg. colloidal calcium carbonate)

IT Polyamines

 RL: MOA (Modifier or additive use); USES (Uses)

 (polyethylene-, reaction products, reaction products with calcium C22-alkylbenzenesulfonate, formaldehyde, and **oleic acid**; additive to lubrication oils contg. colloidal calcium carbonate)

IT Mannich bases

 RL: MOA (Modifier or additive use); USES (Uses)

 (reaction products contg. unsatd. fatty acids; additive to lubrication oils contg. colloidal calcium carbonate)

IT Hydrocarbons, uses

 RL: NUU (Other use, unclassified); USES (Uses)

 (solvent; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oil additives

 (stabilizers; additive to lubrication oils contg. colloidal calcium carbonate)

IT Fatty acids, uses

 RL: MOA (Modifier or additive use); USES (Uses)

 (unsatd., reaction products with Mannich bases; additive to lubrication oils contg. colloidal calcium carbonate)

- IT 50-00-0D, Formaldehyde, reaction products with calcium C22-alkylbenzenesulfonate, **oleic acid**, and poly(diethylenepolyamine) 108-95-2D, Phenol, C100-C128, Mannich base-type reaction products with calcium C22-alkylbenzenesulfonate, formaldehyde, and poly(diethylenepolyamine) 112-80-1D, **Oleic acid**, reaction products with calcium C22-alkylbenzenesulfonate, formaldehyde, and poly(diethylenepolyamine) 123-56-8D, Succinimide, polyisobutylene deriv. 30977-64-1, Calcium nonylphenolate
 RL: MOA (Modifier or additive use); USES (Uses)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 98-11-3D, Benzenesulfonic acid, C22 and other alkyl derivs., alk. earth metal salts
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 1305-62-0DP, Calcium hydroxide, complexes with zinc di-C2-C8 alkyl- and di- C9-C12 alkyl-aryl- dithiophosphate O- esters 4563-55-7DP, Zinc diisobutyl phosphorodithioate, complexes with calcium hydroxide 6990-43-8DP, Zinc dibutyl dithiophosphate, complexes with calcium hydroxide 7268-60-2DP, Zinc diethyl dithiophosphate, complexes with calcium hydroxide 19210-06-1DP, Zinc dithiophosphate, di- C2-C8 alkyl or di- C9-C12 alkyl-aryl O-esters 26566-95-0DP, Zinc bis[O-(2-ethylhexyl)-O'-isobutyl] dithiophosphate, complexes with calcium hydroxide 27985-91-7DP, complexes with calcium hydroxide 91650-70-3DP, complexes with calcium hydroxide 142276-46-8DP, Phosphorodithioic acid, calcium zinc salt, di- C2-C8 alkyl or di- C9-C12 alkyl-aryl O-esters
 RL: MOA (Modifier or additive use); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 69-72-7DP, Salicylic acid, C16-C18 alkyl and other alkyl derivs., alk. earth metal salts
 RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 19210-06-1DP, Zinc dithiophosphate, di- C2-C8 alkyl or di- C9-C12 alkyl-aryl O-esters, complexes with alk. earth **metal oxides** and hydroxides
 RL: MOA (Modifier or additive use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 11059-65-7D, complexes with calcium hydroxide
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 71-43-2, Benzene, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 7732-18-5, Water, uses
 RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 78-83-1, Isobutanol, reactions 104-76-7, 2-Ethylhexanol 124-38-9, Carbon dioxide, reactions 1305-62-0, Calcium hydroxide, reactions 1314-80-3, Phosphorus pentasulfide (P2S5) 35296-72-1, Butanol 38888-96-9, Nonylphenol sulfide, calcium salt 73366-53-7, Dodecylphenol sulfide, calcium salt
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (additive to lubrication oils contg. colloidal calcium carbonate)
- IT 463-79-6DP, Carbonic acid, alkali earth metal salts
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (colloidal **dispersions** of; additive to lubrication oils contg. colloidal calcium carbonate)

- IT 471-34-1P, Calcium carbonate, uses
 RL: MOA (Modifier or additive use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (colloidal; additive to lubrication oils contg. colloidal calcium carbonate)
- IT 7439-92-1, Lead, properties 7440-50-8, Copper, properties
 RL: PRP (Properties)
 (corrosion of; additive to lubrication oils contg. colloidal calcium carbonate)
- IT 1314-13-2, Zinc oxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (neutralization of di-O-esters of dithiophosphoric acids; additive to lubrication oils contg. colloidal calcium carbonate)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Infineum International Limited; EP 1018539 A2 2000 CAPLUS
- (2) Karonite Chemical Co Ltd; US 4057504 A 1977
- (3) Phillips Petroleum Company; US 3523897 A 1970 CAPLUS
- (4) Societe Nationale Elf Aquitaine; EP 0438942 A1 1991 CAPLUS
- (5) The Lubrizol Corporation; WO 8906237 A1 1989 CAPLUS

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Full	<input checked="" type="checkbox"/> Citing
Text	<input type="checkbox"/> References

- AN 1995:37517 CAPLUS
- DN 122:41298
- ED Entered STN: 08 Nov 1994
- TI Photophysical studies on nanoscale clusters and cluster-assembled materials
- AU LI, Tiejin; Xiao, Liangzhi; Peng, Xiaogang; Zhang, Yan; Zou, Bingsuo; Wang, Dejun; Fei, Haosheng; Bao, Xinnu; Zhu, Ziqiang
- CS Jilin University, Changchun, 130023, Peop. Rep. China
- SO Photochem. Photoelectrochem. Convers. Storage Sol. Energy, Proc. Int. Conf., 9th (1993), Meeting Date 1992, 313-29. Editor(s): Tian, Zhao Wu. Publisher: Int. Acad. Publ., Beijing, Peop. Rep. China.
- CODEN: 60HRAS
- DT Conference
- LA English
- CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
- AB There are several subjects been mentioned. The red shift is discussed of the optical absorption band edge of TiO₂ ultrafine particles (UFP) caused by the Coulomb term of the equation given by L.E. Brus (1986, 1987, 1989). The nonlinear optical properties are discussed of Fe₂O₃ UFP (as the example of several kinds of **metal oxide** semiconductor UFP). $\chi(3)$ Of the UFP coated with a layer of **surfactant** increases 2 orders comparing with the naked UFP, resulting from the dielec. confinement. The nanocluster ordered assemblies built-up by Langmuir-Blodgett (LB) technique are discussed. The fatty acid salts LB films is only suitable for the prepn. of the inorg. compd. monolayers by the reaction of the LB films with H₂S or other agents, and the LB films of PMAO (polymaleic acid octodecanol part ester) salts is a better matrix. By LB method, the nanoclusters can be transferred directly from their hydrosol to form a kind of 3 dimensional quantum dot superlattice.
- ST photophys nanoscale cluster assembled material
- IT Optical absorption
 (band edge; of titanium dioxide ultrafine particles)
- IT Optical nonlinear property
 (four-wave mixing; of ferric oxide **surfactant**-coated ultrafine particles)
- IT Fatty acids, uses
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (nanoscale cluster-assembled materials by reaction of hydrogen sulfide

with Langmuir-Blodgett films contg.)

IT Materials
 (nanoscale cluster-assembled; photophys. studies on)

IT Clusters
 (nanoscale; photophys. studies on)

IT **Surfactants**
 (nonlinear optical properties of ultrafine particles coated with layer of)

IT Dielectric constant and **dispersion**
 (of ultrafine particles coated with **surfactant** layer)

IT Superlattices
 (quantum dot; photophys. studies on nanoscale clusters and cluster-assembled materials)

IT Films
 (Langmuir-Blodgett, fatty acid; nanoscale cluster-assembled materials by reaction of hydrogen sulfide with)

IT Semiconductor devices
 (quantum dots, superlattice; photophys. studies on nanoscale clusters and cluster-assembled materials)

IT Optical nonlinear property
 (third-order, of ferric oxide **surfactant**-coated ultrafine particles)

IT 7789-75-5, Calcium difluoride, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (IR spectra of lead stearate Langmuir-Blodgett films on)

IT 57-11-4, Stearic acid, uses
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (lead sulfide reaction with hydrogen sulfide in Langmuir-Blodgett films contg.)

IT 7783-06-4, Hydrogen sulfide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (nanoscale cluster-assembled materials by reaction of Langmuir-Blodgett films with)

IT 112-80-1, Oleic acid, uses 822-16-2, Sodium stearate
1072-35-1, Lead distearate 25155-30-0, Sodium dodecylbenzenesulfonate
159745-54-7
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (nanoscale cluster-assembled materials by reaction of hydrogen sulfide with Langmuir-Blodgett films contg.)

IT 1309-37-1, Ferric oxide, properties
 RL: PRP (Properties)
 (nonlinear optical properties of **surfactant**-coated ultrafine particles of)

IT 13463-67-7, Titanium dioxide, properties
 RL: PRP (Properties)
 (optical absorption band edge of ultrafine particles of)

IT 7440-21-3, Silicon, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (photocond. and x-ray diffraction of ferric oxide-stearic acid Langmuir-Blodgett films on)

IT 7631-86-9, Silica, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (photocond. and x-ray diffraction of ferric oxide-stearic acid Langmuir-Blodgett films on silicon contg.)

IT 1314-87-0, Lead monosulfide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with hydrogen sulfide in stearic acid Langmuir-Blodgett films)

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(FILE 'HOME' ENTERED AT 17:31:26 ON 18 AUG 2004)

FILE 'CAPLUS' ENTERED AT 17:31:43 ON 18 AUG 2004
 L1 2529 S METAL OXIDE AND DISPERSION
 L2 118 S L1 AND SURFACTANT
 L3 51419 S (OLEIC ACID OR DODECYLBENZENE SULFONIC ACID)
 L4 2 S L2 AND L3

=> s 12 and (magnesium oxide or calcium oxide or titanium oxide or iron oxide or strontium oxide
 407813 MAGNESIUM
 88 MAGNESIUMS
 407847 MAGNESIUM
 (MAGNESIUM OR MAGNESIUMS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 55969 MAGNESIUM OXIDE
 (MAGNESIUM(W) OXIDE)
 692144 CALCIUM
 32 CALCIUMS
 692147 CALCIUM
 (CALCIUM OR CALCIUMS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 36394 CALCIUM OXIDE
 (CALCIUM(W) OXIDE)
 417222 TITANIUM
 77 TITANIUMS
 417232 TITANIUM
 (TITANIUM OR TITANIUMS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 78432 TITANIUM OXIDE
 (TITANIUM(W) OXIDE)
 892551 IRON
 11157 IRONS
 893330 IRON
 (IRON OR IRONS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 85869 IRON OXIDE
 (IRON(W) OXIDE)
 167157 STRONTIUM
 4 STRONTIUMS
 167158 STRONTIUM
 (STRONTIUM OR STRONTIUMS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 51311 STRONTIUM OXIDE
 (STRONTIUM(W) OXIDE)
 223905 BARIUM
 12 BARIUMS
 223907 BARIUM
 (BARIUM OR BARIUMS)
 1490372 OXIDE

317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 16024 BARIUM OXIDE
 (BARIUM(W)OXIDE)
 L5 34 L2 AND (MAGNESIUM OXIDE OR CALCIUM OXIDE OR TITANIUM OXIDE OR
 IRON OXIDE OR STRONTIUM OXIDE OR BARIUM OXIDE)

=> d 15 1-34 all

L5 ANSWER 1 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 2004:462800 CAPLUS
 DN 141:25183
 ED Entered STN: 09 Jun 2004
 TI Aqueous magnetic ink character recognition ink-jet ink composition
 containing a combination of special **surfactants**
 IN Mcelligott, Michael J.; Snyder, Donald E., Jr.; Coutta, Ronald E.
 PA Nu-Kote International, Inc., USA
 SO U.S., 6 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C09D011-00
 NCL 106031650; 106031670; 106031660; 106457000; 106460000; 106480000;
 106479000; 106453000; 106499000
 CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>PI US 6746527</u>	B1	20040608	<u>US 2003-397912</u>	20030326
<u>PRAI US 2003-397912</u>		20030326		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6746527	ICM C09D011-00	106031650; 106031670; 106031660; 106457000; 106460000; 106480000; 106479000; 106453000; 106499000

AB An aq. ink-jet ink compn. for MICR applications is provided comprising a **metal oxide pre-dispersion** combined with an aq. ink-jet ink compn., wherein the **metal oxide pre-dispersion** contains **metal oxide** pigment or particles of a very small particle size, at least one **surfactant** to aid in the aid in the **dispersion** of the **metal oxide** particles. Particularly, the **surfactant** component is a combination of an anionic **surfactant** and an anionic-nonionic **surfactant**, or may be a combination of other types of **surfactants**.

ST aq magnetic ink character recognition jet compn **metal oxide**

IT **Surfactants**

(anionic; aq. magnetic ink character recognition ink-jet ink compn.
 contg. combination of special **surfactants**)

IT Oxides (inorganic), uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (aq. magnetic ink character recognition ink-jet ink compn. contg.
 combination of special **surfactants**)

IT Magnetic materials

(inks; aq. magnetic ink character recognition ink-jet ink compn. contg.
 combination of special **surfactants**)

IT Inks

(jet-printing; aq. magnetic ink character recognition ink-jet ink
 compn. contg. combination of special **surfactants**)

IT Inks

(magnetic; aq. magnetic ink character recognition ink-jet ink compn.
 contg. combination of special **surfactants**)

- IT **Surfactants**
 (nonionic; aq. magnetic ink character recognition ink-jet ink compn.
 contg. combination of special **surfactants**)
- IT 108-31-6D, Maleic anhydride, copolymers, sodium salts
 RL: TEM (Technical or engineered material use); USES (Uses)
 (anionic **surfactant**; aq. magnetic ink character recognition
 ink-jet ink compn. contg. combination of special **surfactants**)
- IT 1309-38-2, Magnetic oxide, uses 1332-37-2, **Iron oxide**
 , uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aq. magnetic ink character recognition ink-jet ink compn. contg.
 combination of special **surfactants**)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Brown; US 6638982 B2 2003 CAPLUS
- (2) Foucher; US 5969003 A 1999 CAPLUS
- (3) Kappele; US 5656071 A 1997 CAPLUS
- (4) Mitchell; US 5026427 A 1991 CAPLUS
- (5) Nishizawa; US 5547804 A 1996 CAPLUS
- (6) Sambucetti; US 4026713 A 1977 CAPLUS
- (7) Thakur; US 5240626 A 1993 CAPLUS
- (8) Ziolo; US 5670078 A 1997 CAPLUS

L5 ANSWER 2 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2004:264849 CAPLUS
 DN 140:289564
 ED Entered STN: 01 Apr 2004
 TI **Dispersions of ultrafine metal-oxide particles and thin films of ultrafine metal-oxide particles**
 IN Yamashita, Yasuhisa
 PA Murata Manufacturing Co., Ltd., Japan
 SO PCT Int. Appl., 37 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM C01B013-32
 ICS C01G023-00
 CC 49-3 (Industrial Inorganic Chemicals)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004026762	A1	20040401	WO 2003-JP11821	20030917
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI JP 2002-274598	A	20020920		
JP 2003-77651	A	20030320		
JP 2003-313463	A	20030905		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004026762	ICM	C01B013-32
	ICS	C01G023-00

AB The title **dispersions** are manufd. by hydrolysis of micro-emulsions

contg. composite metal alkoxides, hydrophobic dispersing media, water(0.95-3.0 times the theor. amt.), and **surfactants**, and used for manuf. of the title thin films(e.g., perovskite Ba-Ti oxides).

ST **metal oxide** ultrafine particle **dispersion** film

IT Oxides (inorganic), preparation

RL: IMF (Industrial manufacture); PREP (Preparation)
(ultrafine particles; **dispersions** of ultrafine **metal-oxide** particles and thin films of ultrafine **metal-oxide** particles)

IT 12047-27-7P, Barium **titanium oxide**, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)
(perovskite; thin films of ultrafine barium-**titanium oxide** particles)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Kaneka Corp; JP 03-46401 B2 1991 CAPLUS
- (2) Kaneka Corp; EP 125507 A2 1991 CAPLUS
- (3) Kaneka Corp; US 4579594 A 1991 CAPLUS
- (4) Kaneka Corp; US 4668299 A 1991 CAPLUS
- (5) Ricoh Co Ltd; JP 02-233505 A 1990 CAPLUS
- (6) Ricoh Co Ltd; JP 03-69506 A 1991 CAPLUS

L5 ANSWER 3 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full	<input checked="" type="checkbox"/> Citing
Text	<input type="checkbox"/> References

AN 2004:263021 CAPLUS

DN 140:408102

ED Entered STN: 31 Mar 2004

TI Nano-structured polymer coatings for ultraviolet protection

AU Katangur, Phaneshwar; Warner, Steven B.; Patra, Prabir K.; Kim, Yong K.; Mhetre, Shamal K.; Dhanote, Autumn

CS Department of Textile Science, University of Massachusetts Dartmouth, N. Dartmouth, MA, 02747, USA

SO Materials Research Society Symposium Proceedings (2003), 788(Continuous Nanophase and Nanostructured Materials), 589-594
CODEN: MRSPDH; ISSN: 0272-9172

PB Materials Research Society

DT Journal

LA English

CC 40-5 (Textiles and Fibers)

Section cross-reference(s): 42, 78

AB Polymer materials such as Kevlar that are susceptible to UV degrdn. may be protected by appropriate coatings. We are using zinc oxide and titanium dioxide nanoparticles with an av. particle size ranging from 25 to 70 nm. Five wt. percent nanoparticles were dispersed in acrylic coatings, the **dispersion** is assisted by addn. of a non-ionic **surfactant**, mech.

stirring and ultrasonication. The UV protective mechanism of nanoparticle-embedded coatings is theor. explained using Mie theory. We estd. the min. thickness of a 5 wt. % nanoparticle-embedded coatings that is required to prevent the UV radiation from reaching the base of the substrate. Results obtained from nanoparticle-embedded acrylic-coated Kevlar fabric and neat acrylic-coated Kevlar fabric after exposure to UV radiation in QUV weatherometer show that the nanoparticle coating offers protection. UV-visible spectroscopy was used to obtain quant. results.

ST Kevlar fabric nanoparticle coating zinc oxide titania acrylic resin; UV protection **metal oxide** nanoparticle coating Kevlar

IT Nanoparticles

(Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide** for UV protection)

IT Acrylic polymers, uses

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide** for UV protection)

IT Coating materials

(UV-resistant; Kevlar fabrics coated with nano-structured coatings
contg. zinc or **titanium oxide** for UV protection)

IT Absorptivity
(UV; of Kevlar fabrics coated with nano-structured coatings contg. zinc
or **titanium oxide**)

IT Polyamide fibers, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES
(Uses)
(aramid; Kevlar fabrics coated with nano-structured coatings contg.
zinc or **titanium oxide** for UV protection)

IT Dispersing agents
(in prepn. of Kevlar fabrics coated with nano-structured coatings
contg. zinc or **titanium oxide**)

IT 1314-13-2, Zinc oxide, uses 13463-67-7, Titanium dioxide, uses
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(Kevlar fabrics coated with nano-structured coatings contg. zinc or
titanium oxide for UV protection)

IT 61827-42-7, Trycol 5952
RL: MOA (Modifier or additive use); USES (Uses)
(dispersant; in prepn. of Kevlar fabrics coated with nano-structured
coatings contg. zinc or **titanium oxide**)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Benedict, R; Seymour/Carraher's Polymer Chemistry 2000, P423
- (2) Bohren, C; Absorption and Scattering of light by Small Particles 1981, P130
- (3) Innes, B; <http://www.ant-powders.com/pdfs/ASCCconferencepaperscreenquality.pdf>
- (4) McNaught, A; IUPAC Compendium of Chemical Terminology, 2nd edition 1997, P3
- (5) Phaneshwar, K; Poly Mater Sci & Eng 2003, V89, P723
- (6) Sakamoto, M; J Jpn Soc Mater 1995, V68(4) CAPLUS
- (7) Wypych, G; Hand Book of Material Weathering 2003, P1

L5 ANSWER 4 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	<input checked="" type="checkbox"/> Citing References
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AN 2004:18577 CAPLUS
 DN 140:61180
 ED Entered STN: 09 Jan 2004
 TI Aqueous magnetic ink character recognition ink-jet ink composition
 IN McElligott, Michael J.; Snyder, Donald E.
 PA Nu-Kote International, Inc., USA
 SO U.S. Pat. Appl. Publ., 11 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C09D011-02
 ICS C09C001-34; C09C001-22; C04B014-00; C08K005-00
 NCL 106031650; 106031670; 106031860; 106457000; 106460000; 106480000;
 106453000; 106479000; 106499000
 CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 2004003756	A1	20040108	US 2002-186492	20020701
US 6726759	B2	20040427		
WO 2004003087	A1	20040108	WO 2003-US14898	20030512
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,				

CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
 NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
 GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-186492 A 20020701

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004003756	ICM	C09D011-02
	ICS	C09C001-34; C09C001-22; C04B014-00; C08K005-00
	NCL	106031650; 106031670; 106031860; 106457000; 106460000; 106480000; 106453000; 106479000; 106499000

US 2004003756 ECLA C09D011/00C2B

AB An aq. ink-jet ink compn. for magnetic ink character recognition (MICR) applications is provided comprising a **metal oxide pre-dispersion** combined with an aq. ink-jet ink compn., wherein the **metal oxide pre-dispersion** contains **metal oxide** pigment or particles of a very small particle size, about 0.5 µm or less, and exhibiting remanence of at least 20 emu/g. The **metal oxide** particles may be coated with a hydrophilic coating, and the **pre-dispersion** may contain at least one **surfactant** to aid in the **dispersion** of the **metal oxide** particles. Also provided are various processing techniques to enhance the MICR ink performance, including conventional and non-conventional grinding techniques and various filtration techniques to enhance the MICR ink performance, including conventional and non-conventional grinding techniques and various filtration techniques.

ST magnetic character recognition ink aq jet printing oxide particle

IT Oxides (inorganic), uses

RL: TEM (Technical or engineered material use); USES (Uses)
(aq. magnetic ink character recognition ink-jet ink compn.)

IT Inks

(jet-printing, water-thinned; aq. magnetic ink character recognition ink-jet ink compn.)

IT 1309-38-2, Magnetite, uses 1312-76-1, Potassium silicate 1312-81-8, Lanthanum oxide 1313-97-9, Neodymium oxide 1314-36-9, Yttrium oxide, uses 1332-37-2, Iron oxide, uses 1344-09-8, Sodium silicate 1344-70-3, Copper oxide 1344-72-5, Copper silicate 11099-11-9, Vanadium oxide 11104-61-3, Cobalt oxide 11118-57-3, Chromium oxide 11129-60-5, Manganese oxide

RL: TEM (Technical or engineered material use); USES (Uses)
(aq. magnetic ink character recognition ink-jet ink compn.)

IT 1335-30-4, Aluminum silicate

RL: TEM (Technical or engineered material use); USES (Uses)
(hydrophilic coating; aq. magnetic ink character recognition ink-jet ink compn.)

L5 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

AN 2004:3309 CAPLUS

DN 140:61166

ED Entered STN: 04 Jan 2004

TI Process for the preparation of aqueous magnetic ink character recognition ink-jet ink compositions

IN Mcelligott, Michael J.; Snyder, Donald E.

PA Nu-Kote International, Inc., USA

SO U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM C09C001-34

ICS C09C001-22; C09D011-00; C01G049-08

NCL 106031650; 252062560; 252062590; 106456000; 106453000; 106479000;
106480000

CC 42-12 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>US 2004000254</u>	A1	20040101	<u>US 2002-186440</u>	20020701
	<u>US 6767396</u>	B2	20040727		
	<u>WO 2004003088</u>	A1	20040108	<u>WO 2003-US14910</u>	20030512
				W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG	

PRAI US 2002-186440 A 20020701

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 2004000254	ICM	C09C001-34
	ICS	C09C001-22; C09D011-00; C01G049-08
	NCL	106031650; 252062560; 252062590; 106456000; 106453000; 106479000; 106480000

AB A process for prep. an aq. ink-jet ink compn. for MICR applications is provided comprising prep. a **metal oxide** pre-dispersion combined with an aq. ink-jet ink compn., wherein the **metal oxide** pre-dispersion contains **metal oxide** pigment or particles of a very small particle size, about 0.5 μm or less, and exhibiting high remanence of at least 20 emu/g. The **metal oxide** particles may be coated with a hydrophilic coating, and the pre-dispersion may contain at least one **surfactant** to aid in the dispersion of the **metal oxide** particles. Special processing involving the use of conventional and non-conventional grinding techniques and various filtration techniques enhance the compatibility of the MICR ink-jet ink with the ink-jet equipment, resulting in superior ink life and print quality.

ST magnetic ink character recognition ink jet compn; **metal oxide** dispersion magnetic ink character recognition ink jet

IT Inks

(jet-printing; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)

IT Silicates, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(pigment coatings; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)

IT Oxides (inorganic), uses

RL: TEM (Technical or engineered material use); USES (Uses)
(pigments; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)

IT 1335-30-4, Aluminum silicate

RL: TEM (Technical or engineered material use); USES (Uses)
(coating; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)

IT 1309-38-2, Magnetite, uses 1312-81-8, Lanthanum oxide 1314-36-9,

Yttrium oxide, uses 1332-37-2, **Iron oxide**, uses 1344-70-3, Copper oxide 11099-11-9, Vanadium oxide 11104-61-3, Cobalt oxide 11118-57-3, Chromium oxide 11129-60-5, Manganese oxide 12648-30-5, Neodymium oxide

RL: TEM (Technical or engineered material use); USES (Uses)
(pigment; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)

L5 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2003:805911 CAPLUS
 DN 139:308940
 ED Entered STN: 15 Oct 2003
 TI coating compositions with good dyeability and durability and laminates
 IN Takeshita, Katsuyoshi
 PA Seiko Epson Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C09D163-00
 ICS C09D183-02; C09D183-07; G02B001-11
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>JP 2003292882</u>	A2	20031015	<u>JP 2002-103447</u>	20020405
PRAI	<u>JP 2002-103447</u>			20020405	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003292882	ICM	C09D163-00 ICS C09D183-02; C09D183-07; G02B001-11

AB Title compns. comprise (A) composite fine particles with particle size 1-100 μm comprising **metal oxides** of Si, Sb, and Ti, (B) silane compds. having ≥ 1 polymerizable group, and (C) multifunctional epoxy compds. Thus, 20%-solids **titanium oxide**-antimony ptaoxide-silicon dioxide composite fine particle 1853.4, 30%-solids Oscal 1132 colloidal silica **dispersion** 225, and γ -glycidoxypyropyltrimethoxysilane 399 g were mixed, Denacol EX 212 388.7, magnesium perchlorate 10.5, L 7001 silicone **surfactant** 1.5, and Sanol LS 770 5.3 g were added therein and pH was adjusted at 4.82 to give a coating compn., a lens was soaked therein, dried at 80° for 20 min, and baked at 110° for 180 min to give a coating with good appearance and dyeability, which was plasma-treated, vacuum-deposited with SiO₂, ZrO₂, SiO₂, ZrO₂, and SiO₂ in this order to give a test piece with good adhesion, dyeability, and durability.

ST coating compn dyeability durability laminate; **titanium oxide** antimony ptaoxide silicon dioxide composite fine particle; colloidal silica glycidoxypyropyltrimethoxysilane Denacol coating compn

IT Polyurethanes, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (acrylic, primer coatings; coating compns. with good dyeability and durability and laminates)

IT Antireflective films
 Eyeglass lenses
 Primers (paints)
 (coating compns. with good dyeability and durability and laminates)

IT Silsesquioxanes
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (epoxy-; coating compns. with good dyeability and durability and laminates)

IT Silsesquioxanes
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

- (epoxy-polysiloxane-; coating compns. with good dyeability and durability and laminates)
- IT Polysiloxanes, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(epoxy-silsesquioxane-; coating compns. with good dyeability and durability and laminates)
- IT Coating materials
(hard coating; coating compns. with good dyeability and durability and laminates)
- IT Coating materials
(multilayer; coating compns. with good dyeability and durability and laminates)
- IT Oxides (inorganic), uses
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(particles; coating compns. with good dyeability and durability and laminates)
- IT Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polysiloxane-silsesquioxane-; coating compns. with good dyeability and durability and laminates)
- IT Acrylic polymers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyurethane-, primer coatings; coating compns. with good dyeability and durability and laminates)
- IT Acrylic polymers, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(silicate-silsesquioxane-, epoxy; coating compns. with good dyeability and durability and laminates)
- IT Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(silsesquioxane-; coating compns. with good dyeability and durability and laminates)
- IT Polycarbonates, uses
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(substrates; coating compns. with good dyeability and durability and laminates)
- IT 1314-23-4, Zirconium oxide, uses
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antireflection coating; coating compns. with good dyeability and durability and laminates)
- IT 156941-04-7P, Denacol EX 314- γ -glycidoxypropyltrimethoxysilane copolymer 186143-01-1P, Denacol EX 212- γ -glycidoxypropyltrimethoxysilane copolymer 186143-02-2P, Denacol EX 321- γ -glycidoxypropyltrimethoxysilane- γ -methacryloyloxypropyltrimethoxysilane-tetramethoxysilane copolymer 186152-72-7P, Denacol EX 313- γ -glycidoxypropylmethyldimethoxysilane- γ -glycidoxypropyltrimethoxysilane copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(coating compns. with good dyeability and durability and laminates)

- IT 13463-67-7, Titanium oxide, uses
 •RL: MQA (Modifier or additive use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (composite particle with antimony pentaoxide and silicon dioxide;
 coating compns. with good dyeability and durability and laminates)
- IT 7631-86-9, Oscal 1132, uses
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (composite particle with titanium pentaoxide and antimony pentaoxide,
 optionally antireflective coating; coating compns. with good dyeability
 and durability and laminates)
- IT 1314-60-9, Antimony pentaoxide
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (composite particle with titanium pentaoxide and silicon dioxide;
 coating compns. with good dyeability and durability and laminates)
- IT 399519-21-2, Neostecker 700
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (primer coating; coating compns. with good dyeability and durability
 and laminates)

L5 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2003:417935 CAPLUS
 DN 138:403249
 ED Entered STN: 01 Jun 2003
 TI Deacidification of cellulose-based materials using alkaline particles in hydrofluorocarbons
 IN Thomas, Raymond H. P.; Diggs, David
 PA Honeywell International Inc., USA
 SO PCT Int. Appl., 18 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM D21H025-18
 CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
 Section cross-reference(s): 20

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>WO 2003044277</u>	A2	20030530	<u>WO 2002-US36955</u>	20021118
	<u>WO 2003044277</u>	A3	20031016		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	<u>US 2003150571</u>	A1	20030814	<u>US 2002-299474</u>	20021118
PRAI	<u>US 2001-346759P</u>	P	20011116		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003044277	ICM	D21H025-18

AB A method of deacidification of a cellulose-based material comprises (a) providing a compn. comprising a hydrofluorocarbon (HFC) having b.p. from -18.5 to 55° and a deacidification agent dispersed in the

hydrofluorocarbon, and (b) increasing pH of the cellulose-based material by contacting the material with the compn. The deacidification agent is selected from **metal oxides**, hydroxides, carbonates, salts, HFC is selected from pentafluoropropanes, pentafluorobutanes and hexafluorobutanes, and a fluorinated **surfactant** can be added. Thus, a compn. comprising HFC 245FA (1,000), **magnesium oxide** (3.2) and Fluorad FC 740 **surfactant** (0.8 g) was produced and used for deacidification of 63 yr old paper samples.

ST cellulose material paper deacidification alk particle hydrofluorocarbon dispersion

IT Books

Paper
(deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT Hydroxides (inorganic)
Oxides (inorganic), uses
Salts, uses
RL: MOA (Modifier or additive use); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT Hydrocarbons, uses
RL: NUU (Other use, unclassified); USES (Uses)
(fluoro; deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT Surfactants
(fluorosurfactants; deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT Carbonates, uses
RL: MOA (Modifier or additive use); USES (Uses)
(metal salts; deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT 1309-48-4, Magnesium oxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT 406-58-6, HFC 365 460-73-1, HFC 245FA 679-86-7, HFC 245CA 811-97-2, HFC 134A 37145-47-4, Pentafluoropropane 74469-62-8, Hexafluorobutane
141529-32-0, Pentafluorobutane
RL: NUU (Other use, unclassified); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT 78768-89-5, Fluorad FC 740
RL: NUU (Other use, unclassified); USES (Uses)
(fluorinated **surfactant**; deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

L5 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

	Full Text	Citing References
AN	2003:396690	CAPLUS
DN	138:390578	
ED	Entered STN:	23 May 2003
TI	Sunscreen compositions containing metal oxide and nonionic surfactants	
IN	Kessell, Lorna Margaret	
PA	Imperial Chemical Industries PLC, UK	
SO	PCT Int. Appl., 22 pp. CODEN: PIXXD2	
DT	Patent	
LA	English	
IC	ICM A61K007-42	
CC	62-4 (Essential Oils and Cosmetics)	
FAN.CNT 1		

PATENT NO. KIND DATE APPLICATION NO. DATE

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PI	<u>WO 2003041677</u>	A2	20030522	<u>WO 2002-GB5107</u>	20021113
	<u>.WO 2003041677</u>	A3	20030717		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	<u>EP 1443894</u>	A2	20040811	<u>EP 2002-781391</u>	20021113
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
PRAI	<u>GB 2001-27325</u>	A	20011114		
	<u>WO 2002-GB5107</u>	W	20021113		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2003041677	ICM	A61K007-42

AB A compn. comprises a nonionic **surfactant** and hydrophobic particles of **metal oxide** having the mean length of the primary particles in the range 50-90 nm, the mean width of the primary particles in the range 5-20 nm, and the median vol. particle diam. of the secondary particles is <45 nm. The compn. is particularly suitable for use in aq. media, and can be used in a sunscreen product that exhibits both effective UV protection and improved transparency. Thus, particles of TiO₂ were obtained by the reaction of titanium dioxychloride with NaOH, followed by the addn. of sodium aluminate soln. equiv. to 9% by wt. of Al₂O₃ on TiO₂ wt. A **dispersion** was produced by mixing the above TiO₂, 18 g ethoxylated isodecyl alc., 12 g ethoxylated cetyl alc., 8 g silicone defoamer, and 185 g water.

ST sunscreen **metal oxide** nonionic **surfactant**

IT Absorptivity
(UV; sunscreen compns. contg. **metal oxide** and nonionic **surfactants**)

IT **Surfactants**
(nonionic; sunscreen compns. contg. **metal oxide** and nonionic **surfactants**)

IT Sunscreens
(sun protection factor; sunscreen compns. contg. **metal oxide** and nonionic **surfactants**)

IT Coating materials
Hydrophile-lipophile balance value

Molecular weight distribution

Particle size distribution

Skin

Sunscreens

(sunscreen compns. contg. **metal oxide** and nonionic **surfactants**)

IT Oxides (inorganic), biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(sunscreen compns. contg. **metal oxide** and nonionic **surfactants**)

IT 1344-28-1, Alumina, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(sunscreen compns. contg. **metal oxide** and nonionic **surfactants**)

IT 13463-67-7, **Titanium oxide**, biological studies
RL: COS (Cosmetic use); FMU (Formation, unclassified); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(sunscreen compns. contg. **metal oxide** and nonionic

- surfactants)
- IT .11138-49-1, Sodium aluminate
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
 (sunscreen compns. contg. **metal oxide** and nonionic **surfactants**)
- IT 13780-39-7, Titanium oxydichloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sunscreen compns. contg. **metal oxide** and nonionic **surfactants**)

L5 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full	Citing
Text	References

- AN 2002:776485 CAPLUS
 ED Entered STN: 11 Oct 2002
 TI Aqueous chemical growth of 3-D arrays of **metal oxide** nanomaterials
 AU Vayssières, Lionel
 CS Department of Physics and Physical Chemistry, Uppsala University, SE-75121
 Uppsala, Swed.
 SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United
 States, August 18-22, 2002 (2002), PHYS-146 Publisher: American Chemical
 Society, Washington, D. C.
 CODEN: 69CZPZ
 DT Conference; Meeting Abstract
 LA English
 AB Ordered purpose-built nanomaterials have been obtained by a novel
 synthesis and theor. concept which consists of growing **metal oxide**
 thin films directly onto substrates at pptn. and **dispersion** conditions
 yielding to thermodn. colloidal stability (i.e. low interfacial tension).
 Such specific state is reached by controlling exptl. (i.e. chem. and
 electrostatically) the interfacial tension of the system as described
 quant. by a thermodn. model based on Gibbs adsorption equation. The
 outcome allows the fabrication of nano- to microparticulate thin films of
metal oxides with controlled particle size, morphol. and nanoparticle
 orientation onto substrates without template or **surfactant**. Cryst. 1D
 nanorods of **iron oxides** (hematite and akaganeite) assembled into 3D
 bundles with controlled parallel and perpendicular orientation, 3D array
 of corundum chromium oxide-**iron oxide** nanocomposite, and highly
 oriented 3D nanorod-array of ZnO have been obtained onto various (single
 and polycryst.) substrates from the condensation of metal salts in aq.
 soln. at low temp.

L5 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full	Citing
Text	References

- AN 2002:315033 CAPLUS
 DN 136:342204
 ED Entered STN: 26 Apr 2002
 TI Method for preparing pearlescent pigment with good luster and chroma by
 coating **metal oxides** on synthesized mica
 IN Chang, Kil-Wan; Lim, Kwang-Su
 PA S. Korea
 SO PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C09C001-36
 CC 42-6 (Coatings, Inks, and Related Products)
 FAN.CNT 1
- | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| PI WO 2002033007 | A1 | 20020425 | WO 2000-KR1411 | 20001205 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, | | | | |

CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001020260	A5	20020429	AU 2001-20260	20001205
DE 10085488	T	20031224	DE 2000-10085488	20001205
JP 2004511644	T2	20040415	JP 2002-536381	20001205
US 2004096579	A1	20040520	US 2003-398814	20030409
PRAI KR 2000-60532	A	20001014		
WO 2000-KR1411	W	20001205		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2002033007	ICM	C09C001-36
JP 2004511644	FTERM	4J037/AA26; 4J037/CA09; 4J037/DD24; 4J037/EE03; 4J037/EE04; 4J037/EE26; 4J037/EE28; 4J037/EE29; 4J037/EE33; 4J037/EE35; 4J037/EE43; 4J037/EE46; 4J037/FF09

US 2004096579	ECLA	C09C001/00F
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AB The method comprises (A) grinding a synthesized mica (e.g., JEC 1) with water to particle size 100-500 μm and sepg. the mica, (B) dispersing the sepd. mica particle in water, optionally in the presence of a **surfactant**, and adjusting pH to 1-4, (C) adding the **metal oxide** precursors (TiOCl_2) and a basic aq. soln. to the mica dispersion while maintaining the pH range until the desired color is attained to form ≥ 1 hydrous **metal oxide** layer on the synthesized mica particle, and (D) filtering, water-washing, drying and calcining the synthesized mica coated with the **metal oxide** layer (e.g., TiO_2).

ST pearlescent pigment **metal oxide** coat luster; mica synthesized coating **metal oxide** chroma

IT Betaines

RL: NUU (Other use, unclassified); USES (Uses)
(amidoalkyl, **surfactant**; method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT **Surfactants**

(amphoteric; method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT **Surfactants**

(anionic; method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT **Surfactants**

(cationic; method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT Pearlescent pigments

(method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT Oxides (inorganic), uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT **Surfactants**

(nonionic; method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT Mica-group minerals, uses

RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(synthetic; Method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 1338-43-8, Sorbitan monooleate
 RL: NNU (Other use, unclassified); USES (Uses)
 (Monopol SP 1, **surfactant**; method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 13463-67-7P, Titania, uses 18282-10-5P, Tin dioxide
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 1308-38-9, Chromium oxide, uses
 RL: NNU (Other use, unclassified); USES (Uses)
 (method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 7646-78-8, Tin tetrachloride, reactions 13780-39-7, Titanium chloride oxide (TiOC₂)
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 1309-37-1, Iron oxide, uses 1309-48-4,
Magnesium oxide, uses 1313-13-9, Manganese dioxide,
 uses 1314-23-4, Zirconium dioxide, uses 1344-28-1, Alumina, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 1322-93-6, Aerosol OS 2673-22-5, TR 70 12676-09-4, Aerosol C 61
 415898-41-8, Mitaine CA
 RL: NNU (Other use, unclassified); USES (Uses)
 (**surfactant**; method for prep. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Em Industries Inc; US 6056815 A 2000 CAPLUS
- (2) Merck Patent Gesellschaft Mit Beschränkter Haftung; US 4086100 A 1978
- (3) The Mearl Corp; US 4038099 A 1977 CAPLUS

L5 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 2001:516194 CAPLUS
 DN 135:108735
 ED Entered STN: 17 Jul 2001
 TI Colorant nanoscale particles having excellent dispersibility, their ink-jet inks, and their manufacture
 IN Zaima, Hiroaki; Matsui, Hideo
 PA Kansai Research Institute Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09B067-08
 ICS B41J002-01; B41M005-00; C09C001-40; C09C003-08; C09D011-00
 CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001192582	A2	20010717	JP 2000-331122	20001030
	US 6527843	B1	20030304	US 2000-705283	20001102
PRAT	JP 1999-312740	A	19991102		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

 JP 2001192582 ICM C09B067-08

ICS B41J002-01; B41M005-00; C09C001-40; C09C003-08;
C09D011-00

- AB The colorant nanoscale particles, having excellent storage stability, transparency, coloring power, and dispersibility in nonpolar and polar solvents both, comprise fine particles contg. dyes and **metal oxides**, preferably **metal oxide** hydrosols, and coated with org. compds. bearing ionic groups. Thus, an aq. TiO₂ hydrosol was adsorbed with C.I. Basic Blue 26 then with Na dodecylbenzenesulfonate (SDS) to give TiO₂-SDS organosol/dye composite and subsequently dried in vacuo to give colorant particles having mean particle size 10.2 nm and CV value 12.08% and showing excellent dispersibility in PhMe, ethylene glycol di-Et ether, THF, etc., the **dispersions** being transparent and free from pptn. after 1 mo. A waterborne ink-jet ink contg. the fine particles, tetraethylene glycol monobutyl ether, glycerin, and diethylene glycol and having mean particle size 25 nm gave water-resistant vivid images with suppressed blur.
- ST colorant nanoscale particle dispersibility ink jet; nanoparticle colorant **surfactant** coated **metal oxide**; waterborne ink jet nanoparticle colorant titania; **metal oxide** support colorant nanoparticle ink; sol gel **metal oxide** nanoparticle colorant
- IT Coloring materials
(manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT **Surfactants**
(nonionic, dye-supporting **metal oxides** coated with;
manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT Sol-gel processing
(prepn. of **metal oxides** by, for dye supports;
manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT 1314-13-2P, Zinc oxide, uses 1314-23-4P, Zirconia, uses 1332-29-2P, Tin oxide 1332-37-2P, **Iron oxide**, uses 1344-28-1P, Alumina, uses 11129-18-3P, Cerium oxide 13463-67-7P, Titania, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye supports, prep'd. by sol-gel process; manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT 112-02-7, Hexadecyltrimethylammonium chloride 25155-30-0, Sodium dodecylbenzenesulfonate
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(dye-supporting **metal oxides** coated with; manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT 493-52-7, Methyl red 2580-56-5, C.I. Basic Blue 26
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(supported on **metal oxides**, coated with **surfactants**; manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT 1559-34-8, Tetraethylene glycol monobutyl ether
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(**surfactants**, colorant nanoparticles treated with; manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)

L5 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2000:540983 CAPLUS

DN 133:165231

ED Entered STN: 08 Aug 2000

TI Aqueous polymer emulsions containing functional microparticles and their
 use in coating of photographic films
 IN Kubo, Nobuo; Ueda, Eiichi; Shibue, Toshiaki; Kurachi, Ikuo
 PA Konica Co., Japan
 SO Jpn. Kokai Tokkyo Koho, 33 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L101-14
 ICS C08J003-03; C08J003-075; C09D017-00; C09D189-00; G03C001-00;
 G03C001-04; G03C001-06; G03C001-32; G11B005-633; G11B005-702
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 74

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>JP 2000219816</u>	A2	20000808	<u>JP 1999-25027</u>	19990202
<u>PRAI JP 1999-25027</u>		19990202		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000219816	ICM	C08L101-14
	ICS	C08J003-03; C08J003-075; C09D017-00; C09D189-00; G03C001-00; G03C001-04; G03C001-06; G03C001-32; G11B005-633; G11B005-702

AB The emulsions are obtained by dispersing a mixt. of hydrophobic high-boiling solvent(s) having b.p. $\geq 175^\circ$ and functional microparticles, or a similar mixt. also contg. hydrophobic polymer and a solvent having b.p. $\leq 160^\circ$, in an aq. soln. of hydrophilic polymer in the presence of a **surfactant**, where the functional microparticles can be elec. conductive **metal oxides** or magnetic fillers for forming antistatic or data-recording layers, etc., on image-recording materials and photog. films. Thus, mixing colloidal silica 10 with tricresyl phosphate 30, poly(Bu acrylate) 10 and AcOEt 100, dispersing with a sand mill for 2 h, combining with 500 g a 12% aq. soln. of gelatin contg. 5 g triisopropylnaphthalenesulfonate Na salt at 50° and distg. off AcOEt in vacuo using an explosion-proof device gave a **dispersion** with good storage stability. Mixing the **dispersion** with an aq. soln. of gelatin at a polymer concn. 6% and 1,2-bis(vinylsulfonylacetamido)ethane at 20 mg/g-gelatin as curing agent and other additives, coating the resulting mixt. on a PET polyester film to dry thickness 3.5 μm and drying gave a coated film with good adhesion and freedom from crack.

ST photog film coating polymer emulsion; colloidal silica filler emulsion coating photog film

IT Coating materials
 Photographic films
 Photoimaging materials

(aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

IT Gelatins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

IT Solvents
 (high-boiling; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

IT Coating materials
 (magnetic; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

IT Mica-group minerals, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (microparticles; aq. polymer emulsions contg. functional microparticles

IT and use in coating of photog. films)

IT ·**Polyesters, uses**
RL: TEM (Technical or engineered material use); USES (Uses)
(support film; aq. polymer emulsions contg. functional microparticles
and use in coating of photog. films)

IT **1309-37-1, Iron oxide (Fe2O3), uses**
RL: MOA (Modifier or additive use); USES (Uses)
(Co-contg. microparticles; aq. polymer emulsions contg. functional
microparticles and use in coating of photog. films)

IT **7631-86-9, Colloidal silica, uses 173320-42-8 219808-14-7**
RL: MOA (Modifier or additive use); USES (Uses)
(aq. polymer emulsions contg. functional microparticles and use in
coating of photog. films)

IT **25267-41-8, Poly-tert-Butylacrylamide**
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
engineered material use); USES (Uses)
(aq. polymer emulsions contg. functional microparticles and use in
coating of photog. films)

IT **9003-39-8, Poly(N-vinyl-2-pyrrolidone) 9003-49-0, Poly(butyl acrylate)**
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(aq. polymer emulsions contg. functional microparticles and use in
coating of photog. films)

IT **66710-66-5, 1,2-Bis(vinylsulfonylacetamido)ethane**
RL: MOA (Modifier or additive use); USES (Uses)
(hardener; aq. polymer emulsions contg. functional microparticles and
use in coating of photog. films)

IT **84-74-2, Dibutyl phthalate 1323-65-5, Dinonylphenol 1330-78-5,**
Tricresyl phosphate
RL: NUU (Other use, unclassified); USES (Uses)
(high-boiling solvent; aq. polymer emulsions contg. functional
microparticles and use in coating of photog. films)

IT **9012-09-3, Cellulose triacetate 24968-11-4 25038-59-9, PET polyester,**
uses **25853-85-4, Dimethyl 2,6-naphthalenedicarboxylate-ethylene glycol**
copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(support film; aq. polymer emulsions contg. functional
microparticles and use in coating of photog. films)

IT **1323-19-9, Sodium Triisopropylnaphthalenesulfonate**
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant; aq. polymer emulsions contg. functional
microparticles and use in coating of photog. films)

L5 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2000:133630 CAPLUS
 DN 132:168337
 ED Entered STN: 25 Feb 2000
 TI Compositions for forming transparent conductive nanoparticle coatings and
their preparation
 IN Aikens, John H.; Sarkas, Harry W.; Brotzman, Richard W., Jr.; Helvoigt,
Sara
 PA Nanophase Technologies Corp., USA
 SO PCT Int. Appl., 25 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC C01G019-00; C01B013-14; C03C017-25; H01L031-18; H01B001-0
 CC 49-3 (Industrial Inorganic Chemicals)
 Section cross-reference(s): 38, 42, 52, 73, 76
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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<u>PI</u>	<u>WO 2000009446</u>	A1	20000224	<u>WO 1999-US18677</u>	19990816
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	<u>US 6416818</u>	B1	20020709	<u>US 1999-374751</u>	19990813
	<u>CA 2340751</u>	AA	20000224	<u>CA 1999-2340751</u>	19990816
	<u>AU 9955675</u>	A1	20000306	<u>AU 1999-55675</u>	19990816
	<u>AU 758075</u>	B2	20030313		
	<u>EP 1109741</u>	A1	20010627	<u>EP 1999-942253</u>	19990816
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	<u>JP 2003527454</u>	T2	20030916	<u>JP 2000-564901</u>	19990816
<u>PRAI</u>	<u>US 1998-96829P</u>	P	19980817		
	<u>US 1999-374751</u>	A	19990813		
	<u>WO 1999-US18677</u>	W	19990816		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
			C01G019-00IC	C01B013-14IC	C03C017-25IC
	<u>WO 2000009446</u>	IC	H01L031-18IC	H01B001-0	
	<u>WO 2000009446</u>	ECLA	C01B013/14B; C03C017/10; C03C017/25; H01B001/20; H01L031/18J		
	<u>US 6416818</u>	ECLA	C03C017/10; C03C017/25		
<u>AB</u>	A substantially stable aq. dispersion of metal or metal oxide particles is used in forming a transparent conductive coating. The process comprises (a) adding a nanocryst. material to water, the nanocryst. material comprising primary particles of metal or metal oxide having a substantially spherical shape and (b) mixing the nanocryst. material and water to form an aq. dispersion . The substantially stable aq. dispersion is useful in forming a transparent conductive coating using film forming agents. The films may be coated with silane monomers or oligomers, and cured, e.g., at 300-800°C.				
<u>ST</u>	transparent conductive coating nanoparticle dispersion ; antistatic coating nanoparticle dispersion				
<u>IT</u>	Polyethers, processes				
	RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(aliph., film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)				
<u>IT</u>	Coating materials				
	(antistatic; compns. for forming transparent conductive nanoparticle coatings and their prepn.)				
<u>IT</u>	Nanoparticles				
	Semiconductor films				
	(compns. for forming transparent conductive nanoparticle coatings and their prepn.)				
<u>IT</u>	Coating materials				
	(elec. conductive, transparent; compns. for forming transparent conductive nanoparticle coatings and their prepn.)				
<u>IT</u>	Alcohols, processes				
	Fatty acids, processes				
	RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)				
	(ethoxylated, film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)				
<u>IT</u>	Surfactants				

(film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT Phosphates, processes
 Polyoxyalkylenes, processes
 Polysilanes
 Polysiloxanes, processes
 Silanes
 Silicates, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT 1312-43-2, Indium oxide 1317-38-0, Copper oxide CuO, processes
1332-29-2, Tin oxide 1332-37-2, **Iron oxide**, processes 7440-05-3, Palladium, processes 7440-06-4, Platinum, processes 7440-22-4, Silver, processes 7440-57-5, Gold, processes 12673-86-8, Antimony tin oxide 50926-11-9, Indium tin oxide
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT 1333-74-0, Hydrogen, processes 7440-37-1, Argon, processes 7727-37-9, Nitrogen, processes
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT 78-10-4, TEOS 681-84-5, TMOS
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT 56-81-5D, Glycerol, esters 7664-38-2D, Phosphoric acid, esters, processes 9002-89-5, Polyvinyl alcohol 9004-34-6, Cellulose, processes 25322-68-3, Polyethylene glycol
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Eichorst Dennis, J; US 5866287 A 1999 CAPLUS
- (2) Lagaly, G; ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY chapter 2 1986, P342

L5 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full	<input checked="" type="checkbox"/>	Citing
Text	<input type="checkbox"/>	References

AN 2000:53357 CAPLUS
 DN 132:97871
 ED Entered STN: 23 Jan 2000
 TI Sunscreen composition containing an anionic **surfactant**, compositions filtering ultraviolet radiation and an amphiphilic cationic or dipolar ion compound
 IN Allard, Delphine; Candau, Didier; Morgantini, Luc
 PA L'Oreal, Fr.
 SO PCT Int. Appl., 38 pp.
 CODEN: PIXXD2
 DT Patent
 LA French

IC ICM A61K007-42
 CC .62-4 (Essential Oils and Cosmetics)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>WO 2000002529</u>	A1	20000120	<u>WO 1999-FR1608</u>	19990705
	W: AU, BR, CA, CN, CZ, HU, JP, KR, MX, PL, RU, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	<u>FR 2780879</u>	A1	20000114	<u>FR 1998-8828</u>	19980709
	<u>FR 2780879</u>	B1	20020920		
	<u>CA 2303337</u>	AA	20000120	<u>CA 1999-2303337</u>	19990705
	<u>AU 9946221</u>	A1	20000201	<u>AU 1999-46221</u>	19990705
	<u>AU 738645</u>	B2	20010920		
	<u>EP 1011624</u>	A1	20000628	<u>EP 1999-929393</u>	19990705
	<u>EP 1011624</u>	B1	20031112		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	<u>BR 9906592</u>	A	20000718	<u>BR 1999-6592</u>	19990705
	<u>JP 2002520264</u>	T2	20020709	<u>JP 2000-558791</u>	19990705
	<u>AT 253888</u>	E	20031115	<u>AT 1999-929393</u>	19990705
	<u>ES 2205842</u>	T3	20040501	<u>ES 1999-929393</u>	19990705
	<u>US 6375936</u>	B1	20020423	<u>US 2000-486240</u>	20000224
PRAI	<u>FR 1998-8828</u>	A	19980709		
	<u>WO 1999-FR1608</u>	W	19990705		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2000002529	ICM	A61K007-42
WO 2000002529	ECLA	A61K007/42; A61K008/04H; A61Q017/04
FR 2780879	ECLA	A61K007/42; A61K008/04H; A61Q017/04

OS MARPAT 132:97871

AB A cosmetic compn., in particular for skin and/or hair protection, in the form of a **dispersion** comprise two non-miscible phases stabilized by at least an anionic **surfactant** selected among the salts of fatty acid and of monovalent or polyvalent metals, of ammonium or org. bases, a compd. filtering UV radiation capable of being adsorbed at the interface of said non-miscible phases, derived from benzylidene camphor and comprising at least a sulfonic acid function partially or completely neutralized, a **metal oxide** nanopigment coated with hydrocarbon hydrophobic agents and an amphiphilic cationic or dipolar ion compd. which leads with the anionic **surfactant** to the formation of a compd. capable of lowering the water/paraffin oil interfacial tension at 40° by more than 14 mN.m-1 for an anionic **surfactant** concn. of 0.1 mmole/100g, by more than 26mN.m-1 for an anionic **surfactant** concn. of 0.5 mmole/100g and by more than 33 mN.m-1 for an anionic **surfactant** concn. of 1 mmole/100g. A sunscreen emulsion contained Arlachel 165 2, stearic acid 2.5, cetyl alc. 0.5, polydimethylsiloxane 5.5, fatty acid triglycerides 4, isoparaffin 3, karite butter 1.5, jojoba oil 1.5, **titanium oxide** nanopigment 5, Uvinul N 539 10, Parsol-1789 2, glycerin 4, propylene glycol 4, benzene 1,4-[di(3-methylidenedecampho-10-sulfonic)] acid 0.5%, cocobetaine 2, Pemulen TR1 0.12, hydroxypropylmethyl cellulose 0.1, triethanolamine 0.83, preservatives q.s., perfume q.s., and water q.s. 100%.

ST sunscreen anionic **surfactant** UV radiation filter

IT Quaternary ammonium compounds, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(C16-18-alkylbenzyldimethyl; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT Phenols, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(alkyl; sunscreen compn. contg. anionic **surfactant**, compns.

- IT filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
Quaternary ammonium compounds, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(alkylbenzyldimethyl, bromides; sunscreen compn. contg. anionic
surfactant, compns. filtering UV radiation and amphiphilic
cationic or dipolar ion compd.)
- IT Quaternary ammonium compounds, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(alkylbenzyldimethyl, chlorides; sunscreen compn. contg. anionic
surfactant, compns. filtering UV radiation and amphiphilic
cationic or dipolar ion compd.)
- IT Quaternary ammonium compounds, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(alkylbenzyldimethyl, saccharinates; sunscreen compn. contg. anionic
surfactant, compns. filtering UV radiation and amphiphilic
cationic or dipolar ion compd.)
- IT Amphoteric materials
(amphiphilic; sunscreen compn. contg. anionic **surfactant**,
compns. filtering UV radiation and amphiphilic cationic or dipolar ion
compd.)
- IT **Surfactants**
(anionic; sunscreen compn. contg. anionic **surfactant**, compns.
filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Betaines
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(cocamidopropyl derivs.; sunscreen compn. contg. anionic
surfactant, compns. filtering UV radiation and amphiphilic
cationic or dipolar ion compd.)
- IT Cosmetics
(emollients; sunscreen compn. contg. anionic **surfactant**,
compns. filtering UV radiation and amphiphilic cationic or dipolar ion
compd.)
- IT Fatty acids, biological studies
Glycols, biological studies
Polyoxyalkylenes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(esters; sunscreen compn. contg. anionic **surfactant**, compns.
filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Amides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(ethoxylated; sunscreen compn. contg. anionic **surfactant**,
compns. filtering UV radiation and amphiphilic cationic or dipolar ion
compd.)
- IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(fatty, ethoxylated; sunscreen compn. contg. anionic **surfactant**,
compns. filtering UV radiation and amphiphilic cationic or dipolar
ion compd.)
- IT Carboxylic acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(hydroxy; sunscreen compn. contg. anionic **surfactant**, compns.
filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Onium compounds
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(imidazolium compds., benzylcocoacylhydroxyethyl; sunscreen compn.

contg. anionic **surfactant**, compns. filtering UV radiation and
 . amphiphilic cationic or dipolar ion compd.)
 IT Radicals, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (inhibitors; sunscreen compn. contg. anionic **surfactant**,
 compns. filtering UV radiation and amphiphilic cationic or dipolar ion
 compd.)
 IT Cosmetics
 (moisturizers; sunscreen compn. contg. anionic **surfactant**,
 compns. filtering UV radiation and amphiphilic cationic or dipolar ion
 compd.)
 IT Solvents
 (org.; sunscreen compn. contg. anionic **surfactant**, compns.
 filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
 IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (salts; sunscreen compn. contg. anionic **surfactant**, compns.
 filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
 IT Antioxidants
 Gelation agents
 Opacifiers
 Perfumes
 Preservatives
 Propellants (sprays and foams)
 Reducing agents
 Sequestering agents
 Stabilizing agents
 Sunscreens
 Thickening agents
 UV A radiation
 UV B radiation
 (sunscreen compn. contg. anionic **surfactant**, compns.
 filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
 IT Ceramides
 Glycerides, biological studies
 Oxides (inorganic), biological studies
 Polymers, biological studies
 Polysiloxanes, biological studies
 Sulfobetaines
 Vitamins
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (sunscreen compn. contg. anionic **surfactant**, compns.
 filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
 IT 56-81-5D, Glycerol, esters 57-09-0, Cetyltrimethylammonium bromide
 57-50-1D, Saccharose, esters 96-55-9, Decyl betaine 104-74-5,
 Laurylpypyridinium chloride 107-43-7D, Betaine, cocoacyl derivs.
 112-00-5, Dodecyltrimethylammonium chloride 112-03-8,
 Stearyltrimethylammonium chloride 122-18-9, Cetalkonium chloride
 122-19-0, Stearalkonium chloride 138-32-9, Cetyltrimethylammonium
 tosylate 593-81-7, Trimethylammonium chloride 593-81-7D,
 Trimethylammonium chloride, cocoacyl derivs. 683-10-3, Lauryl betaine
 693-33-4, Cetyl betaine 820-66-6 871-37-4, Oleyl betaine 1119-94-4,
 Dodecyltrimethylammonium bromide 1314-13-2, Zinc oxide, biological
 studies 1314-23-4, Zirconium oxide, biological studies 1332-37-2,
 Iron oxide, biological studies 1406-18-4, Vitamine
 2601-33-4 4292-10-8, Lauramidopropyl betaine 6179-44-8 6197-30-4,
 Uvinul N 539 6917-36-8D, Pentitol, esters 7541-59-5D, Tetritol, esters
 9005-63-4D, Polyoxyethylene sorbitan, esters 11129-18-3, Cerium oxide
 12441-09-7D, Sorbitan, fatty acid esters 13463-67-7, Titanium dioxide,
 biological studies 16766-82-8D, benzalkonium salts 16841-14-8,
 Behenalkonium chloride 17301-53-0, Behenyltrimethylammonium chloride

25054-76-6, Oleamidopropyl betaine 25322-68-3D, Peg, esters
 25618-55-7D, Polyglycerol, esters 26920-62-7, Behenyl betaine
 32954-43-1 37139-99-4, Olealkonium chloride 45007-61-2D, Hexitol,
 esters 59272-84-3, Myristamidopropyl betaine 62281-04-3, 65060-02-8,
 Cetyltrimethylammonium methosulfate 70356-09-1 71850-81-2
 81646-13-1, Behenyltrimethylammonium methosulfate 84750-06-1, Arlacet
 165 138789-85-2, Pemulen TR1 157101-46-7, Lauralkonium bromide
 191226-60-5

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)

(sunscreen compn. contg. anionic **surfactant**, compns.

filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; CAPLUS
- (2) Deckner, G; US 4970216 A 1990 CAPLUS
- (3) L 'Oreal; EP 0603080 A 1994 CAPLUS
- (4) Lion Corp; JP 06072830 A 1994 CAPLUS
- (5) Marschner, F; US 5045307 A 1991 CAPLUS
- (6) Patel, A; US 5348736 A 1994 CAPLUS
- (7) The Procter & Gamble Co; WO 9728785 A 1997 CAPLUS
- (8) Unilever Plc; EP 0386898 A 1990 CAPLUS

L5 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Citing
 References

AN 1999:818991 CAPLUS
 DN 132:69087
 ED Entered STN: 30 Dec 1999
 TI Cosmetic sunscreen composition containing a **metal oxide** nanopigment
and an acrylic terpolymer
 IN Candau, Didier; Hansenne, Isabelle
 PA L'Oreal, Fr.
 SO Eur. Pat. Appl., 13 pp.
 CODEN: EPXXDW
 DT Patent
 LA French
 IC ICM A61K007-48
 ICS A61K007-06; A61K007-42
 CC 62-4 (Essential Oils and Cosmetics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>PI</u>	<u>EP 966954</u>	A1	19991229	<u>EP 1999-401429</u>	19990611
	<u>EP 966954</u>	B1	20020220		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	<u>FR 2779637</u>	A1	19991217	<u>FR 1998-7511</u>	19980615
	<u>FR 2779637</u>	B1	20000901		
	<u>AU 712176</u>	B1	19991028	<u>AU 1999-33963</u>	19990609
	<u>KR 2000006055</u>	A	20000125	<u>KR 1999-21477</u>	19990610
	<u>RU 2181997</u>	C2	20020510	<u>RU 1999-112558</u>	19990610
	<u>AT 213404</u>	E	20020315	<u>AT 1999-401429</u>	19990611
	<u>ES 2168837</u>	T3	20020616	<u>ES 1999-401429</u>	19990611
	<u>PT 966954</u>	T	20020830	<u>PT 1999-401429</u>	19990611
	<u>CN 1247058</u>	A	20000315	<u>CN 1999-111269</u>	19990614
	<u>BR 9902762</u>	A	20000509	<u>BR 1999-2762</u>	19990614
	<u>US 6060041</u>	A	20000509	<u>US 1999-332007</u>	19990614
	<u>MX 9905505</u>	A	20000731	<u>MX 1999-5505</u>	19990614
	<u>CA 2274749</u>	AA	19991215	<u>CA 1999-2274749</u>	19990615
	<u>JP 2000026264</u>	A2	20000125	<u>JP 1999-168299</u>	19990615
<u>PRAI</u>	<u>FR 1998-7511</u>	A	19980615		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

EP 966954 . ICM A61K007-48
ICS A61K007-06; A61K007-42

EP 966954 ECLA A61K008/19; A61K008/27; A61K008/28; A61K008/29;
A61K008/81K4; A61Q017/04

FR 2779637 ECLA A61K008/19; A61K008/27; A61K008/28; A61K008/29;
A61K008/81K4; A61Q017/04

US 6060041 ECLA A61K007/06G2; A61K007/42C; A61K007/48N

AB The title compn. is disclosed. The size of **metal oxide** nanopigments, e.g. **titanium oxide**, is 5-100 nm. A gel-cream sunscreen contained a 25% dispersion of methacrylic acid-Me acrylate-ethoxylated behenyl dimethylmetaisopropenylbenzyl isocyanate terpolymer 0.6, C12-15 alkyl benzoate 25, a mixt. of Me, Et, Pr, Bu, iso-Bu p-hydroxybenzoate/phenoxy-2 ethanol 1, **titanium oxide** coated with aluminum/aluminum stearate (MT 100T) 5, triethanolamine 0.48, and water q.s. 100 g.

ST cosmetic sunscreen **metal oxide** acrylic terpolymer

IT Polysiloxanes, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Me hydrogen; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Alcohols, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(amino; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT **Surfactants**
(anionic; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Antioxidants
Beeswax
Gelation agents
Hair preparations
Perfumes
Preservatives
Reducing agents
Sequestering agents
Sunscreens

Surfactants

Thickening agents
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Radicals, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Acids, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Acrylic polymers, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Alkali metal hydroxides

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Amino acids, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

IT Cosmetic sunscreens, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Ceramides
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Lecithins
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Metal alkoxides
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Polysiloxanes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Proteins, general, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Hair preparations
 (creams; cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Cosmetics
 (emollients; cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Alcohols, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (fatty; cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Hair preparations
 Sunscreens
 (gels; cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Cosmetics
 (makeups; cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Solvents
 (org.; cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (potassium salts; cosmetic sunscreen compn. contg. **metal oxide**
 nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (salts, iron and aluminum; cosmetic sunscreen compn. contg.
metal oxide nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies

Polyphosphoric acids
 .RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (sodium salts; cosmetic sunscreen compn. contg. **metal oxide**
oxide nanopigment and acrylic terpolymer)

IT Cosmetics
 (sprays; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Sunscreens
 (sticks; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Hair preparations
 (sunscreens; cosmetic sunscreen compn. contg. **metal oxide**
oxide nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (zinc salts; cosmetic sunscreen compn. contg. **metal oxide**
oxide nanopigment and acrylic terpolymer)

IT 57-11-4, Stearic acid, biological studies 57-11-4D, Stearic acid,
 reaction products with silicon 94-13-3, Propyl p-hydroxybenzoate
94-26-8, Butyl p-hydroxybenzoate 96-26-4, Dihydroxyacetone 99-76-3,
 Methyl p-hydroxybenzoate 102-71-6, Triethanolamine, biological studies
120-47-8, Ethyl p-hydroxybenzoate 557-05-1, Zinc stearate 637-12-7,
 Aluminum stearate 1314-13-2, Zinc oxide, biological studies 1314-23-4,
 Zirconium oxide, biological studies 1332-37-2, **Iron oxide**, biological studies 1344-28-1, Alumina, biological studies
3429-76-3 4247-02-3, Isobutyl p-hydroxybenzoate 5136-76-5, Iron
 stearate 7230-93-5, Aluminum laurate 7440-21-3D, Silicon, reaction
 products with stearic acid, biological studies 7631-86-9, Silicon oxide,
 biological studies 9002-88-4, Polyethylene 9016-00-6,
 Poly[oxy(dimethylsilylene)] 11129-18-3, Cerium oxide 13463-67-7,
Titanium oxide, biological studies 126879-38-7, MT
 100T 138789-85-2, Pemulen trl 253157-48-1
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Coatex; EP 0350414 A 1990 CAPLUS
- (2) Coatex; EP 0577526 A 1994 CAPLUS
- (3) Union Carbide Chemicals & Plastics Technology; WO 9324544 A 1993 CAPLUS

L5 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1999:659557 CAPLUS
 DN 131:287937
 ED Entered STN: 15 Oct 1999
 TI Deacidification of cellulose-based materials using alkaline particles in
 hydrofluoroether carriers
 IN Leiner, Lee H.; Burd, James E.; Gaydos, Robert M.
 PA Preservation Technologies, L.P., USA
 SO PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM D21H025-18
 ICS D21H017-06; D21H017-11
 CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
 Section cross-reference(s): 20
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	<u>WO 9951819</u>	A1	19991014	<u>WO 1999-US6596</u>	19990325
	W: AU, CA, JP, KR				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	<u>US 6080448</u>	A	20000627	<u>US 1998-54690</u>	19980403
	<u>CA 2326998</u>	AA	19991014	<u>CA 1999-2326998</u>	19990325
	<u>AU 9932050</u>	A1	19991025	<u>AU 1999-32050</u>	19990325
	<u>AU 743868</u>	B2	20020207		
	<u>EP 1068395</u>	A1	20010117	<u>EP 1999-914148</u>	19990325
	<u>EP 1068395</u>	B1	20020904		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, PT, IE				
	<u>JP 2002510758</u>	T2	20020409	<u>JP 2000-542527</u>	19990325
	<u>AT 223535</u>	E	20020915	<u>AT 1999-914148</u>	19990325
	<u>PT 1068395</u>	T	20021129	<u>PT 1999-914148</u>	19990325
	<u>ES 2183536</u>	T3	20030316	<u>ES 1999-914148</u>	19990325
	<u>US 6342098</u>	B1	20020129	<u>US 2000-570579</u>	20000512
PRAI	<u>US 1998-54690</u>	A	19980403		
	<u>WO 1999-US6596</u>	W	19990325		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 9951819	ICM	D21H025-18
	ICS	D21H017-06; D21H017-11
US 6080448	ECLA	D21H025/18

AB Books, imaged paper and other imaged materials having a cellulose base are deacidified by treatment with alk. particles of a basic **metal oxide**, hydroxide or salt dispersed in a hydrofluoroether carrier, alone or in combination with a perfluorinated carrier, and a **surfactant** for a sufficient time to raise the pH of the materials. Thus, 25% rag bond paper having initial pH 5.5 was dipped in a dispersion of 0.3 g/L MgO and 0.075 g/L Fomblin monoacid (perfluoropolyoxyether alkanoic acid) in HFE 7100 for 15 min at room temp. and dried, giving pH 9.9 and alk. reserve 1.75 wt.% (CaCO₃ equiv.).

ST deacidification cellulosic material alk particle hydrofluoroether; paper deacidification **magnesium oxide** perfluoropolyoxyether alkanoate; fluoromethoxybutane carrier **magnesium oxide** paper deacidification

IT Books
Paper

Surfactants

(deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT Hydroxides (inorganic)

Oxides (inorganic), uses

Salts, uses

RL: MOA (Modifier or additive use); USES (Uses)

(deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT Polyoxyalkylenes, uses

RL: NUU (Other use, unclassified); USES (Uses)

(fluorine-contg., fatty esters, **surfactant**; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT Ethers, uses

RL: NUU (Other use, unclassified); USES (Uses)

(fluoroalkyl; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT Carboxylic acids, uses

RL: NUU (Other use, unclassified); USES (Uses)

(hydroxy, alkoxylated, perfluoroalkyl ethers, Fomblin Monoacid, **surfactant**; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT Polyoxyalkylenes, uses

RL: NUU (Other use, unclassified); USES (Uses)

(perfluoro, fatty esters, **surfactant**; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT Fluoropolymers, uses
Fluoropolymers, uses
RL: NUU (Other use, unclassified); USES (Uses)
(polyoxyalkylene-, fatty esters, **surfactant**; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT 1309-48-4, **Magnesium oxide**, uses 1314-13-2, Zinc oxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT 219484-64-7, HFE 7100
RL: NUU (Other use, unclassified); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Kato, H; JP 10046497 A 1998 CAPLUS
- (2) Kundrot, R; US 4522843 A 1985
- (3) Leiner, L; US 5409736 A 1995 CAPLUS
- (4) Preservation Tech Inc; WO 9726409 A 1997
- (5) Smith, R; WO 8700217 A 1987 CAPLUS
- (6) Syremont Spa; EP 0543372 A 1993

L5 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full	Citing
Text	References

AN 1998:788661 CAPLUS
 DN 130:43067
 ED Entered STN: 16 Dec 1998
 TI In-situ groundwater remediation by selective colloid mobilization
 IN Seaman, John C.; Bertch, Paul M.
 PA University of Georgia Research Foundation, USA
 SO U.S., 9 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C02F001-52
 NCL 210724000
 CC 61-5 (Water)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5846434	A	19981208	US 1997-808253	19970228
PRAI US 1997-808253		19970228		

CLASS
 PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES
 ----- ----- -----
 US 5846434 ICM C02F001-52
 NCL 210724000

AB An in-situ groundwater remediation pump and treat technique effective for reclamation of aquifers that have been contaminated with a mixed, metal-contg. waste, which promotes selective mobilization of **metal oxide** colloids with a cationic **surfactant**, preferably a quaternary alkylammonium **surfactant**, without significantly reducing formation permeability that often accompanies large-scale colloid **dispersion**, thus increasing the efficiency of the remediation effort by enhancing the capture of strongly sorbing contaminants assocd. with the oxide phases. The resulting suspension can be sepd. from the bulk soln. with controlled pH adjustments to destabilize the oxide colloids, and a clear supernatant which results that can be recycled through the injection well without

ST further waste treatment.

IT in situ groundwater remediation colloid mobilization

IT Quaternary ammonium compounds, uses
RL: NUU (Other use, unclassified); USES (Uses)
(alkyl; in-situ groundwater remediation by selective colloid mobilization)

IT **Surfactants**
(cationic; in-situ groundwater remediation by selective colloid mobilization)

IT Water purification
(flocculation; in-situ groundwater remediation by selective colloid mobilization)

IT Water pollution
(groundwater, remediation of; in-situ groundwater remediation by selective colloid mobilization)

IT Aquifers
Groundwaters
(in-situ groundwater remediation by selective colloid mobilization)

IT Alkali metal hydroxides
Alkaline earth hydroxides
RL: MOA (Modifier or additive use); USES (Uses)
(in-situ groundwater remediation by selective colloid mobilization)

IT Phyllosilicate minerals
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(in-situ groundwater remediation by selective colloid mobilization)

IT Colloids
(**metal oxide**; in-situ groundwater remediation by selective colloid mobilization)

IT Clays, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(phyllosilicate; in-situ groundwater remediation by selective colloid mobilization)

IT Groundwater pollution
(remediation of; in-situ groundwater remediation by selective colloid mobilization)

IT Water purification
(settling; in-situ groundwater remediation by selective colloid mobilization)

IT 1305-62-0, Calcium hydroxide, uses 1310-58-3, Potassium hydroxide, uses
1310-73-2, Sodium hydroxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(in-situ groundwater remediation by selective colloid mobilization)

IT 51-92-3, Tetramethylammonium 66-40-0, Tetraethylammonium 3426-74-2,
Trimethylphenylammonium 10182-92-0, Tetradecyltrimethylammonium
14800-24-9, Benzyltrimethylammonium 16287-71-1,
Benzylidimethyltetradecylammonium 16652-03-2, Benzyltriethylammonium
RL: NUU (Other use, unclassified); USES (Uses)
(in-situ groundwater remediation by selective colloid mobilization)

IT 1332-37-2, **Iron oxide**, processes 1344-28-1, Alumina,
processes 11129-60-5, Manganese oxide
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(in-situ groundwater remediation by selective colloid mobilization)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bateson; US 5303871 1994
- (2) Bernard; US 2894905 1959 CAPLUS
- (3) Boyd; US 5401418 1995 CAPLUS
- (4) Buddemeier, R; Applied Geochemistry 1988, V3, P535 CAPLUS
- (5) Corey; US 5263795 1993
- (6) Coston, J; Geochimica et Cosmochimica Acta 1995, V59(17), P3535 CAPLUS
- (7) Danner; US 5130358 1992 CAPLUS
- (8) Dentel; US 5401417 1995 CAPLUS
- (9) Gaden; US 3054746 1962 CAPLUS
- (10) Gallup; US 5409614 1995 CAPLUS

- (11) Gill; US 5407583 1995 CAPLUS
 (12) Grant; US 5275739 1994 CAPLUS
 (13) Grant; US 5324433 1994 CAPLUS
 (14) Holdar; US 5447638 1995 CAPLUS
 (15) Jaffe; US 5458437 1995 CAPLUS
 (16) Kapan, D; Environ Sci Technol 1994, V28(6)
 (17) Lomasney; US 5405509 1995 CAPLUS
 (18) Manchak; US 5348422 1994
 (19) Manning; US 5000858 1991 CAPLUS
 (20) McCarthy, J; Environ Sci Technol 1989, V23(5), P496 CAPLUS
 (21) Neff; US 5152903 1992 CAPLUS
 (22) Penrose, W; Environ Sci Technol 1990, V24(2), P288
 (23) Puls, R; Environ Sci Technol 1992, V26(3), P614 CAPLUS
 (24) Schmid; US 3106525 1963 CAPLUS
 (25) Stevenson; US 5370800 1994 CAPLUS

L5 ANSWER 18 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1997:223441 CAPLUS
 DN 126:219858
 ED Entered STN: 05 Apr 1997
 TI Silicone oil-based magnetic fluid with low temperature dependence and its manufacture
 IN Fujita, Toyohisa
 PA Taiho Kogyo Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM H01F001-44
 ICS C10M169-04; C10M107-50; C10M125-10; C10N010-16; C10N040-14
 CC 77-8 (Magnetic Phenomena)
 Section cross-reference(s): 38

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 09017626	A2	19970117	JP 1995-167746	19950703
PRAI JP 1995-167746				19950703

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	-----	-----
JP 09017626	ICM H01F001-44	ICS C10M169-04; C10M107-50; C10M125-10; C10N010-16;
		C10N040-14

AB The fluid contains a silicone oil, a CO₂H-contg. anionic **surfactant**, and magnetic **metal oxide** particles and/or magnetic metal particles. The fluid is manufd. by mixing a suspension contg. the magnetic particles with an alkali agent and then with the **surfactant**, controlling pH of the alk. suspension to <2, drying the resulting acidic suspension, and mixing the dried product with a silicone oil. The fluid showed low temp. dependence of viscosity and good **dispersion** stability.

ST silicone oil magnetic fluid **dispersion** stability; **surfactant** anionic magnetic fluid **dispersion** stability

IT **Surfactants**

(anionic, carboxy-contg.; silicone oil-based magnetic fluid with low temp. dependence and its manuf.)

IT **Ferrofluids**

(silicone oil-based magnetic fluid with low temp. dependence and its manuf.)

IT **Polysiloxanes, uses**

RL: TEM (Technical or engineered material use); USES (Uses)
 (silicone oil-based magnetic fluid with low temp. dependence and its manuf.)

- IT 1310-73-2, Sodium hydroxide, uses 7664-93-9, Sulfuric acid, uses
 .RL: NNU (Other use, unclassified); USES (Uses)
 (pH controller; silicone oil-based magnetic fluid with low temp.
 dependence and its manuf.)
- IT 1317-61-9P, Iron oxide (Fe3O4), uses
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (silicone oil-based magnetic fluid with low temp. dependence and its
 manuf.)
- IT 9005-12-3, KF 56 31230-04-3, Methylphenylsilanediol homopolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (silicone oil-based magnetic fluid with low temp. dependence and its
 manuf.)
- IT 61757-59-3
 RL: MOA (Modifier or additive use); USES (Uses)
 (surfactant; silicone oil-based magnetic fluid with low temp.
 dependence and its manuf.)

L5 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

	Full Text	Citing References				
AN	1996:649284 CAPLUS					
DN	125:278721					
ED	Entered STN: 02 Nov 1996					
TI	Storage-stable metal oxide pigment dispersions and coating compositions					
IN	Matsuyama, Masao; Seto, Kazuo; Shimada, Yukio; Goto, Meiji; Nishio, Akira; Terada, Hiromi; Isobe, Satoshi					
PA	Matsushita Electric Works Ltd, Japan; Dainichiseika Color Chem					
SO	Jpn. Kokai Tokkyo Koho, 11 pp. CODEN: JKXXAF					
DT	Patent					
LA	Japanese					
IC	ICM C09B067-20 ICS C04B041-64					
CC	42-6 (Coatings, Inks, and Related Products) Section cross-reference(s): 41					
FAN.CNT 1						
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	JP 08199083	A2	19960806	JP 1995-11035	19950126	
PRAI	JP 1995-11035		19950126			
CLASS						
	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES			
	-----	-----	-----	-----	-----	
	JP 08199083	ICM	C09B067-20			
		ICS	C04B041-64			
OS	MARPAT 125:278721					
AB	Title compns. contain (A) org. solns. of organosilane oligomers prep'd. by partial hydrolysis of R ₁ nSiX _{4-n} [R ₁ = (substituted) C ₁₋₈ hydrocarbyl; X = hydrolyzable group; n = 0-3] in the presence of colloidal silica dispersions in org. solvents or water, and (B) metal oxide pigments, (C) fine powd. silica and/or alumina, and (D) Al alkoxides, Ti alkoxides, and/or Zr alkoxides. Thus, 34.09 parts MeSi(OMe) ₃ were hydrolyzed in the presence of 47.62 parts MA-ST (colloidal silica dispersions in MeOH) and water to give a soln., 100 parts of which were mixed with TiO ₂ 119, Aerosil 380 PE (silica) 2.5, and Al isopropoxide 0.5 part to give a compn. showing no pptn. after 6 mo.					
ST	metal oxide pigment dispersion coating; storage stable pigment dispersion coating; siloxane oligomer pigment dispersion coating; colloidal silica siloxane oligomer dispersion; surfactant resin pigment dispersion coating; titania dispersion siloxane silica coating					
IT	Siloxanes and Silicones, uses RL: TEM (Technical or engineered material use); USES (Uses) (TSR 116; storage-stable metal oxide pigment					

- IT **dispersions** and coating compns.)
 Silsesquioxanes
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (oligomeric; storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT Pigments
Surfactants
 (storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT Fluoropolymers
 RL: TEM (Technical or engineered material use); USES (Uses)
 (storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT Siloxanes and Silicones, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (acrylic, VY 108; storage-stable **metal oxide** pigment **dispersions** and coating compns.)
- IT Coating materials
 (pigmented, storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT 9004-57-3, Ethocel STD 100
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Ethocel STD 100; storage-stable **metal oxide** pigment **dispersions** and coating compns.)
- IT 555-31-7, Aluminum isopropoxide 5593-70-4
 RL: MOA (Modifier or additive use); USES (Uses)
 (additives; storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT 7631-86-9, Silica, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (colloidal, additives, MA-ST; storage-stable **metal oxide** pigment **dispersions** and coating compns.)
- IT 153315-80-1P, Methyltrimethoxysilane homopolymer, ladder sru
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (oligomeric; storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT 25498-03-7P, Methyltrimethoxysilane homopolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (oligomeric; storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT 1309-37-1, Red **iron oxide**, uses 1345-16-0, Cobalt blue 12227-89-3, Black **iron oxide** 13463-67-7, Titania, uses 60650-95-5, Titanium yellow 182761-58-6, Titanium cobalt blue
 RL: MOA (Modifier or additive use); USES (Uses)
 (pigments; storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT 1344-28-1, Aluminum oxide (Al2O3), uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (powd., additives; storage-stable **metal oxide** pigment **dispersions** and coating compns.)
- IT 182761-34-8, N 75 (fluoropolymer)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (storage-stable **metal oxide** pigment
dispersions and coating compns.)
- IT 96725-74-5, Byk-P 104 115452-84-1, Disperbyk 163 164908-59-2, Disperbyk 181
 RL: MOA (Modifier or additive use); USES (Uses)
 (surfactants; storage-stable **metal oxide** pigment **dispersions** and coating compns.)

L5 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

 Full
 Citing
 Text
 References

AN 1995:994750 CAPLUS
 DN 124:90481
 ED Entered STN: 22 Dec 1995
 TI Transparent, hard acrylic siloxane coatings and coated plastic lenses
 IN Kayanoki, Hisayuki
 PA Nippon ARC Co., Ltd., Japan
 SO Ger. Offen., 19 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM C09D183-06
 ICS C09D163-00; C09D004-00; C09D017-00; C08J007-04; C09C003-12;
 G02B001-10; G02B001-11
 ICA C09D183-12; C08G077-14; C08G077-20; C08G077-24; C08G077-26; C08G077-28;
 C08G077-46; C08G059-40
 ICI C08K003-20, C08K003-22, C08K003-36, C08K009-06
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>PI</u>	<u>DE 19511627</u>	A1	19951012	<u>DE 1995-19511627</u>	19950330
	<u>US 5654090</u>	A	19970805	<u>US 1995-405595</u>	19950317
	<u>JP 07325201</u>	A2	19951212	<u>JP 1995-66183</u>	19950324
	<u>FR 2718457</u>	A1	19951013	<u>FR 1995-4028</u>	19950405
	<u>FR 2718457</u>	B1	19990108		
	<u>CN 1113509</u>	A	19951220	<u>CN 1995-103900</u>	19950407
	<u>CN 1057107</u>	B	20001004		
	<u>US 5858077</u>	A	19990112	<u>US 1997-850527</u>	19970502
<u>PRAI</u>	<u>JP 1994-71173</u>	A	19940408		
	<u>US 1995-405595</u>	A3	19950317		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19511627	ICM	C09D183-06
	ICS	C09D163-00; C09D004-00; C09D017-00; C08J007-04; C09C003-12; G02B001-10; G02B001-11
	ICA	C09D183-12; C08G077-14; C08G077-20; C08G077-24; C08G077-26; C08G077-28; C08G077-46; C08G059-40
	ICI	C08K003-20, C08K003-22, C08K003-36, C08K009-06

AB Scratch-resistant coatings showing no interference fringe when applied on transparent substrates with high refractive index (≥ 1.50), dyeable in dark shades and useful for plastic lenses, comprise (1) fine (1-100 nm) particles of ≥ 1 oxide, esp. TiO₂-Fe₂O₃-SiO₂ or TiO₂-Ce₂O₃-SiO₂ mixts. surface-treated with organosilicon compds., (2) a specified epoxy group-contg. (partially hydrolyzed) Si compd., (3) a specified H₂O- or C ≤ 4 alc.-sol. OH- or SH-contg. org. compd. comprising an O, CO₂, S, COS, or CS₂ bridge and ≥ 1 unsatd. group in its main chain, and (4) a curing catalyst. Thus, 170 g H₂O was added gradually to 303 g Optolake 1130F (a metal oxide sol dispersion in MeOH contg. TiO₂, Fe₂O₃, and SiO₂) followed by 191 g γ -glycidoxypolytrimethoxysilane and 69 g (MeO)₃SiMe, the mixt. was stirred for 2 h and dild. with 220 g Me₂CHOH. Polyethylene glycol monomethacrylate (Blenmor PE-200) 40, NH₄ClO₄ (curing catalyst) 3, and a silicone-based surfactant (L 7001) 0.4 g were added to the mixt., the whole was stirred for 1 h, allowed to rest for 48 h at the ambient temp., then applied on an urethane polymer (MR 6) lens, and cured for 1 h at 120° to give a colorless, 1.5-2- μ m-thick title coating with refractive index 1.58, SW hardness 4, and crosshatch adhesion 100/100.

ST acrylic siloxane coating plastic lens; titanium oxide sol coating

plastic lens; **iron oxide** sol coating plastic lens; silica sol coating
 plastic lens; cerium oxide sol coating plastic lens;
 glycidoxypropyltrimethoxysilane **metal oxide** treatment lens coating;
 polyethylene glycol monomethacrylate coating plastic lens; interference
 elimination siloxane coating plastic lens; hardness acrylic siloxane
 coating plastic lens

IT Coating materials
 (acrylic siloxanes, for plastic lenses; transparent, hard acrylic
 siloxane coatings and coated plastic lenses)

IT Urethane polymers, uses
 RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PROC (Process); USES (Uses)
 (optical lenses; transparent, hard acrylic siloxane coatings and coated
 plastic lenses)

IT Lenses
 (plastic; transparent, hard acrylic siloxane coatings and coated
 plastic lenses)

IT Transparent materials
 (substrates; transparent, hard acrylic siloxane coatings and coated
 plastic lenses)

IT Siloxanes and Silicones, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (acrylic, coatings; transparent, hard acrylic siloxane coatings and
 coated plastic lenses)

IT 1314-23-4, Zirconium oxide, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (antireflective coating contg.; transparent, hard acrylic siloxane
 coatings and coated plastic lenses)

IT 25736-86-1, Polyethylene glycol monomethacrylate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coating compn. contg., Blemmer PE 200; transparent, hard acrylic
 siloxane coatings and coated plastic lenses)

IT 78-10-4, Tetraethylorthosilicate 111-45-5, Ethylene glycol monoallyl
 ether 1112-39-6, Dimethyldimethoxysilane 1185-55-3,
 Methyltrimethoxysilane 1306-38-3, Needlal U-15, uses 1314-60-9,
 Antimony oxide (Sb2O5) 1830-78-0, NK Ester 701 2478-10-6,
 4-Hydroxybutyl acrylate 2530-83-8, γ -Glycidoxypolytrimethoxysila
 ne 2996-92-1, Phenyltrimethoxysilane 3524-68-3, Aronix M 305
16969-10-1, 2-Hydroxy-3-phenoxypropyl acrylate 17832-28-9,
 4-Hydroxybutyl vinyl ether 27274-31-3, Nissan Uniox PKA 5001
39420-45-6, Polypropylene glycol monomethacrylate 149719-00-6, Optolake
 1130F 160499-51-4, Optolake 1130A
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coating compn. contg.; transparent, hard acrylic siloxane coatings and
 coated plastic lenses)

IT 7790-98-9, Ammonium perchlorate 13963-57-0, Aluminum acetylacetone
 RL: CAT (Catalyst use); USES (Uses)
 (curing catalyst; transparent, hard acrylic siloxane coatings and
 coated plastic lenses)

IT 9003-39-8, K 25 (Polymer) 25053-15-0, Poly(diallyl phthalate)
158885-88-2, MR 7 (plastic) 172826-42-5, K 23 (plastic) 172826-55-0,
 ML 13
 RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PROC (Process); USES (Uses)
 (optical lens substrate; transparent, hard acrylic siloxane coatings
 and coated plastic lenses)

IT 67006-39-7, TS 26 158885-87-1, MR 6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (optical lens substrate; transparent, hard acrylic siloxane coatings
 and coated plastic lenses)

IT 13463-67-7, Titanium dioxide, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sol dispersion in MeOH contg. **iron oxide**
 and silicon oxide and, Optolake 1130F; transparent, hard acrylic

- siloxane coatings and coated plastic lenses)
- IT 7631-86-9, Silicon dioxide, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sol dispersion in MeOH contg. titanium dioxide and
 iron oxide and, Optolake 1130F; transparent, hard
 acrylic siloxane coatings and coated plastic lenses)
- IT 1345-13-7, Cerium oxide (Ce2O3)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sol dispersion in MeOH contg. titanium dioxide and silicon
 oxide and, Optolake 1130A; transparent, hard acrylic siloxane coatings
 and coated plastic lenses)
- IT 1309-37-1, Iron oxide (Fe2O3), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sol dispersion in MeOH contg. titanium dioxide and silicon
 oxide and, Optolake 1130F; transparent, hard acrylic siloxane coatings
 and coated plastic lenses)

L5 ANSWER 21 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1995:763605 CAPLUS
 DN 123:156276
 ED Entered STN: 30 Aug 1995
 TI A silver halide photographic light sensitive material.
 IN Tsuji, Nobuaki
 PA Konica Corp., Japan
 SO Eur. Pat. Appl., 35 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM G03C001-005
 ICS G03C001-12; G03C001-85; G03C001-89; G03C001-34
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 652469	A1	19950510	EP 1994-308140	19941104
	EP 652469	B1	19970226		
	R: DE, FR, GB, IT				
	US 5554495	A	19960910	US 1994-333141	19941101
	JP 07191433	A2	19950728	JP 1994-273960	19941108
PRAI	JP 1993-279923		19931109		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 652469	ICM	G03C001-005

ICS G03C001-12; G03C001-85; G03C001-89; G03C001-34

AB A Ag halide photog. light-sensitive material is provided, comprising a support having thereon an antistatic layer and further having thereon a Ag halide emulsion layer, wherein the antistatic layer comprises a H2O-sol. conductive polymer and a hydrophobic polymer, the layer having been hardened with a hardener, or the antistatic layer comprises cond. metal oxide particles contg. ≥1 metal selected from Zn, Ti, Sn, Al, In, Si, Mg, Ba, Mo, W and V; and the Ag halide emulsion is spectrally sensitized by adding thereto a substantially H2O-sol. spectral-sensitizing dye as a dispersion of solid particles dispersed in an aq. medium substantially free from an org. solvent and a surfactant.

ST photog film antistatic metal oxide; sensitizing dye aq dispersion
 2134 3412

IT Photographic films
 (antistatic layer for static mark prevention)

IT Photographic sensitizers
 (aq. medium dispersion on antistatic layer for static mark

IT prevention)
 IT 1304-28-5, Barium oxide, uses 1309-48-4,
Magnesium oxide, uses 1312-43-2, Indium oxide
1313-27-5, Molybdenum oxide, uses 1314-13-2, Zinc oxide, uses
1314-34-7, Vanadium oxide (V2O3) 1344-28-1, Aluminum oxide, uses
7631-86-9, Silicon oxide, uses 13463-67-7, **Titanium**
oxide, uses 18282-10-5, Tin oxide (SnO₂) 86801-50-5
 RL: DEV (Device component use); TEM (Technical or engineered material
 use); USES (Uses)
 (antistatic layer for static mark prevention in photog. material)
 IT 110009-46-6 128835-93-8
 RL: MOA (Modifier or additive use); USES (Uses)
 (photog. sensitizer; aq. medium **dispersion** on antistatic
 layer for static mark prevention)

L5 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1995:719419 CAPLUS
 DN 123:92916
 ED Entered STN: 04 Aug 1995
 TI Cosmetic skin-care composition for sun protection containing **metal oxides** and lipophilic agents
 IN Msika, Philippe; Coutelle, Herve
 PA Pierre Fabre Dermo-Cosmetique, Fr.
 SO PCT Int. Appl., 25 pp.
 CODEN: PIXXD2
 DT Patent
 LA French
 IC ICM A61K007-42
 ICS A61K007-02
 CC 62-4 (Essential Oils and Cosmetics)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>WO 9512381</u>	A1	19950511	<u>WO 1994-FR1261</u>	19941028
	W: AU, CA, JP, NZ, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	<u>FR 2711918</u>	A1	19950512	<u>FR 1993-12998</u>	19931102
	<u>FR 2711918</u>	B1	19960126		
	<u>AU 9481095</u>	A1	19950523	<u>AU 1994-81095</u>	19941028
	<u>EP 726757</u>	A1	19960821	<u>EP 1995-900176</u>	19941028
	<u>EP 726757</u>	B1	20010103		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	<u>AT 198416</u>	E	20010115	<u>AT 1995-900176</u>	19941028
	<u>ZA 9408625</u>	A	19950626	<u>ZA 1994-8625</u>	19941102
PRAI	<u>FR 1993-12998</u>	A	19931102		
	<u>WO 1994-FR1261</u>	W	19941028		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9512381	ICM ICS	A61K007-42 A61K007-02
WO 9512381	ECLA	A61K008/04H; A61K008/81K4; A61Q001/02; A61Q017/04; A61Q019/00
FR 2711918	ECLA	A61K008/04H; A61K008/81K4; A61Q001/02; A61Q017/04; A61Q019/00

AB A cosmetic skin-care compn. contains a stable microsphere **dispersion** that includes an oily phase contg. at least one **metal oxide**, an aq. gel forming a continuous phase, and a lipophilic protective agent. A sunscreen cream contained cinnamate 0.5-10, TiO₂ **dispersion** in oil 0.5-25, polyoxyethylene nonylphenol 0.1-5, mineral oil 1-20, crosslinked C10-30 acrylate-alkylacrylate polymers 0.01-1, Carbomer 0-1, HPMC 0-1, AMP pH = 6.5-7, and water q.s. 100%.

ST skin cosmetic **metal oxide** lipophilic agent; sunscreen cream **titanium oxide** polyacrylate

IT Sunscreens

Surfactants
(cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Acrylic polymers, biological studies
Oxides, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Sunscreens
(sprays; cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Cosmetics
(creams, cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Fatty acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(esters, cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Cosmetics
(foundations, cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Vinyl compounds, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(polymers, cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT 57-55-6, Propylene glycol, biological studies 1314-13-2, Zinc oxide, biological studies 1314-23-4, Zirconium oxide, biological studies 1332-37-2, **Iron oxide**, biological studies 1344-28-1, Aluminum oxide, biological studies 9016-45-9 11129-18-3, Cerium oxide 13463-67-7, **Titanium oxide**, biological studies 25496-72-4, Glycerol monooleate 25618-55-7D, Polyglycerol, esters 25637-84-7, Glycerol dioleate 26266-58-0, Sorbitan trioleate 26658-19-5, Sorbitan tristearate 29116-98-1, Sorbitan dioleate 39529-26-5, Decaglycerol decastearate 72347-89-8 136723-98-3 145687-02-1, Pemulen TR 2
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

L5 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1995:397355 CAPLUS
 DN 122:169693
 ED Entered STN: 08 Mar 1995
 TI Wax dispersion of particulate **metal oxide** as solid protector against UV light
 IN Ahlnas, John Thomas; Lofgren, Timo Valdemar
 PA Kemira Pigments Oy, Finland
 SO PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K007-42
 CC 62-4 (Essential Oils and Cosmetics)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	<u>WO 9428867</u>	A1	19941222	<u>WO 1994-FI232</u>	19940602
	W: AU, CA, JP, US			RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE	
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			<u>FI 9401270</u> A 19941204	<u>FI 1994-1270</u> 19940317
	<u>FI 9401270</u>	A	19941204	<u>FI 1994-1270</u>	19940317
	<u>AU 9468459</u>	A1	19950103	<u>AU 1994-68459</u>	19940602
	<u>EP 804144</u>	A1	19971105	<u>EP 1994-916999</u>	19940602
	<u>EP 804144</u>	B1	20021218		
	R: DE, ES, FR, GB, IT				
	<u>ES 2188613</u>	T3	20030701	<u>ES 1994-916999</u>	19940602
	<u>US 5811082</u>	A	19980922	<u>US 1996-557125</u>	19960508
PRAI	<u>FI 1993-2529</u>	A	19930603		
	<u>FI 1994-1270</u>	A	19940317		
	<u>WO 1994-FI232</u>	W	19940602		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 9428867	ICM	A61K007-42
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AB A sunscreen or UV protectant which is less dusty, more stable, and easier to handle than prior art products is provided in the form of solid particles with a mean diam. of $\geq 10 \mu\text{m}$ contg., dispersed in 90-20 wt. parts of wax, 10-80 wt. parts of a pigment which reduces the penetration UV light and is made up of **metal oxide** particles (e.g. TiO₂, ZnO) of mean primary particle diam. $<0.150 \mu\text{m}$. Thus, finely divided TiO₂ 45 was dispersed in a melt of paraffin wax 30, beeswax 5, and Lactodan B30 (emulsifier) 20 wt. parts, cast into sheets, and crushed to granules $\leq 0.84 \text{ mm}$ in size. An oil phase contg. these granules 10.6, Arlacel 780 4.0, mineral oil 12, Miglyol 812 6, and sorbitan isostearate 2 was emulsified with an aq. phase contg. sorbitol 1.25, propylene glycol 1.25, MgSO₄ 0.7, Fomblin HC/25 0.25, and water 61.95 wt. parts at 75°. The resulting sunscreen emulsion had a UV protection factor of 17-20.

ST sunscreen **metal oxide** wax; **titanium oxide** wax sunscreen

IT Surfactants

(dispersing agents; wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Pigments

(**metal oxides**; wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Dispersing agents

Hair preparations

Sunscreens

(wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Beeswax

Candelilla wax

Carnauba wax

Glycerides, biological studies

Japan wax

Lanolin

Oxides, biological studies

Paraffin waxes and Hydrocarbon waxes, biological studies

Waxes and Waxy substances

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Alcohols, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(C12-22, wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (esters, with glycols; wax dispersion of particulate metal oxide as solid protector against UV light)

IT Alcohols, biological studies
 Lanolin
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (ethoxylated, wax dispersion of particulate metal oxide as solid protector against UV light)

IT Carboxylic acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (hydroxy, esters, wax dispersion of particulate metal oxide as solid protector against UV light)

IT Waxes and Waxy substances
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (jojoba, wax dispersion of particulate metal oxide as solid protector against UV light)

IT Glycerides, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (soya mono-, hydrogenated, wax dispersion of particulate metal oxide as solid protector against UV light)

IT Alcohols, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (tallow, ethoxylated, ethoxylated; wax dispersion of particulate metal oxide as solid protector against UV light)

IT 50-70-4D, D-Glucitol, fatty esters 141-22-0D, Ricinic acid, hydrogenated, ethoxylated 1314-13-2, Zinc oxide (ZnO), biological studies 1338-41-6, Famodan MS 2307-68-8, Solan E 5793-94-2, Artodan CP80 13463-67-7, Titanium oxide (TiO₂), biological studies 14792-59-7, Dodecylamine laurate 15830-42-9, Dodecytrimethylammonium dodecyl sulfate 25618-55-7D, Polyglycerol, fatty esters 30234-20-9, Lactodan B 30 31694-55-0, Polyoxyethylene glycerol 36653-82-4, Cetyl alcohol 55840-13-6, Acidan N12 106392-12-5, Poloxamer 338 109768-05-0, Emuldan HA40 110617-70-4, Tetronic 908 113355-73-0, Panodan AM 129711-64-4, Lactodan P22 161544-17-8, Artodan AM 161544-25-8, Artodan CF 40 161544-51-0, Marlophor T 161544-60-1, Noram S 161544-61-2, Artodan NP 55
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (wax dispersion of particulate metal oxide as solid protector against UV light)

L5 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

	Full Text	Citing References
AN	1993:610258	CAPLUS
DN	119:210258	
ED	Entered STN: 13 Nov 1993	
TI	Oil-in-water cosmetic emulsions containing metal oxides	
IN	Dahms, Gerd Herbert	
PA	Tioxide Specialties Ltd., UK	
SO	Eur. Pat. Appl., 12 pp.	
	CODEN: EPXXDW	
DT	Patent	
LA	English	
IC	ICM A61K009-107	
	ICS A61K007-42	

CC 62-4 (Essential Oils and Cosmetics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>EP 559319</u>	A2	19930908	<u>EP 1993-300555</u>	19930126
	<u>EP 559319</u>	A3	19950719		
	<u>EP 559319</u>	B1	19980909		
	R: AT, BE, CH, DE, DK, ES, FR, IT, LI, NL, SE				
	<u>GB 2264703</u>	A1	19930908	<u>GB 1993-1515</u>	19930126
	<u>GB 2264703</u>	B2	19950809		
	<u>AT 170743</u>	E	19980915	<u>AT 1993-300555</u>	19930126
	<u>ES 2121050</u>	T3	19981116	<u>ES 1993-300555</u>	19930126
	<u>CA 2088300</u>	AA	19930830	<u>CA 1993-2088300</u>	19930128
	<u>CA 2088300</u>	C	20030708		
	<u>AU 9332055</u>	A1	19930902	<u>AU 1993-32055</u>	19930128
	<u>AU 658967</u>	B2	19950504		
	<u>ZA 9300893</u>	A	19930913	<u>ZA 1993-893</u>	19930209
	<u>JP 06039271</u>	A2	19940215	<u>JP 1993-38576</u>	19930226
	<u>JP 3421070</u>	B2	20030630		
	<u>US 5443759</u>	A	19950822	<u>US 1993-24069</u>	19930301
	<u>US 5516457</u>	A	19960514	<u>US 1995-503213</u>	19950717
PRAI	<u>GB 1992-4387</u>	A	19920229		
	<u>US 1993-24069</u>	A1	19930301		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

	EP 559319	ICM	A61K009-107
		ICS	A61K007-42
	US 5443759	ECLA	A61K007/42C; A61K007/48A; A61K009/107
AB	Oil in water cosmetic emulsions contain metal oxides having particle size of <0.2µm 0.5-30, emulsifiers <10, an oil phase 5-30, and an aq. phase ≥60%. An oil in water emulsion contained sorbitan monostearate 4.00, stearyl alc. 2.5, paraffin oil 10.00, Tioveil AO (dispersion of TiO ₂ in water) 12.50, glycerol 4.00, Carbomer 934 0.08, and water to 100%.		
ST	emulsion cosmetic metal oxide emulsifier; titanium oxide sorbitan stearate emulsion		
IT	Surfactants Amines, biological studies Siloxanes and Silicones, biological studies RL: BIOL (Biological study) (metal oxides coated with, in oil-in-water cosmetic emulsions)		
IT	Oxides, biological studies RL: BIOL (Biological study) (oil-in-water cosmetic emulsions contg. emulsifiers and)		
IT	Glycerides, biological studies Paraffin oils RL: BIOL (Biological study) (oil-in-water cosmetic emulsions contg. metal oxides and)		
IT	Glycerides, biological studies RL: BIOL (Biological study) (C8-10, oil-in-water cosmetic emulsions contg. metal oxides and)		
IT	Alcohols, biological studies RL: BIOL (Biological study) (amino, metal oxides coated with, in oil-in-water cosmetic emulsions)		
IT	Cosmetics Sunscreens (emulsions, oil-in-water, contg. metal oxides and emulsifiers)		
IT	Fatty acids, esters		

IT RL: BIOL (Biological study)
 (esters, oil-in-water cosmetic emulsions contg. **metal oxides** and)

IT Alcohols, biological studies
 RL: BIOL (Biological study)
 (fatty, oil-in-water cosmetic emulsions contg. **metal oxides** and)

IT Cosmetics
 (moisturizers, emulsions, oil-in-water, contg. **metal oxides** and emulsifiers)

IT Carboxylic acids, biological studies
 RL: BIOL (Biological study)
 (poly-, oil-in-water cosmetic emulsions contg. **metal oxides** and emulsifiers and)

IT Carboxylic acids, compounds
 RL: BIOL (Biological study)
 (poly-, salts, oil-in-water cosmetic emulsions contg. **metal oxides** and emulsifiers and)

IT Alcohols, biological studies
 RL: BIOL (Biological study)
 (polyhydric, **metal oxides** coated with, in oil-in-water cosmetic emulsions)

IT Sunburn and Suntan
 (suntanning agents, emulsions, oil-in-water, contg. **metal oxides** and emulsifiers)

IT 1314-23-4, Zirconium oxide, biological studies 7631-86-9, Silicon oxide, biological studies 9003-01-4 9003-05-8, Polyacrylamide 9004-32-4, Carboxymethyl cellulose 11138-66-2, Xanthan gum
 RL: BIOL (Biological study)
 (**metal oxides** coated with, in oil-in-water cosmetic emulsions)

IT 1344-28-1, Aluminum oxide, miscellaneous
 RL: MSC (Miscellaneous)
 (**metal oxides** coated with, in oil-in-water cosmetic emulsions)

IT 1314-13-2, Zinc oxide (ZnO), biological studies 13463-67-7,
Titanium oxide, biological studies
 RL: BIOL (Biological study)
 (oil-in-water cosmetic emulsions contg. emulsifiers and)

IT 110-27-0, Isopropyl myristate 112-92-5, Stearyl alcohol 661-19-8, Behenyl alcohol 1338-41-6, Sorbitan monostearate 3687-46-5, Decyl oleate 9007-16-3, Carbomer 934 22047-49-0, Octyl stearate 77091-02-2, Rewoderm S 1333
 RL: BIOL (Biological study)
 (oil-in-water cosmetic emulsions contg. **metal oxides** and)

IT 1332-37-2, **Iron oxide**, biological studies
 RL: BIOL (Biological study)
 (oil-in-water cosmetic emulsions contg. emulsifiers and)

L5 ANSWER 25 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full	Citing
Text	References

AN 1993:605889 CAPLUS
 DN 119:205889
 ED Entered STN: 13 Nov 1993
 TI Catalysts for preparation of alkylene oxide adducts
 IN Fukada, Isao; Sugawara, Harushige
 PA Mitsui Toatsu Chemicals, Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07C043-11

ICS B01J023-02; C07C041-02
 ICA C07B061-00
 CC 46-3 (Surface Active Agents and Detergents)
 Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>PI</u>	<u>JP 05170688</u>	A2	19930709	<u>JP 1991-344651</u>	19911226
<u>PRAI</u>	<u>JP 1991-344651</u>		19911226		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 05170688	ICM	C07C043-11
		ICS	B01J023-02; C07C041-02
		ICA	C07B061-00

AB Adducts of active H-contg. org. compds. and alkylene oxides are prep'd. by using Si- and Ba-contg. MgO catalysts. Adding aq. Ba(NO₃)₂ to an aq. dispersion of MgO and Si(OEt)₄, stirring 24 h, drying, and heating at 600° gave a catalyst contg. oxides of Mg, Si, and Ba. The catalyst was used for the ethoxylation of dodecyl alc. with ethylene oxide at 170°, giving polyethylene glycol monododecyl ether contg. 0.2% unreacted alc. and 1.2% PEG.

ST ethoxylation catalyst **metal oxide**; **magnesium oxide** catalyst ethoxylation; silicon oxide catalyst ethoxylation; **barium oxide** catalyst ethoxylation; oxirane ethoxylation catalyst; alc ethoxylation catalyst

IT **Surfactants**

(ethoxylates, prepn. of, catalysts for, **magnesium oxide**-contg.)

IT Ethoxylation catalysts

(**magnesium oxide**, barium- and silicon-contg., for alcs. by oxirane)

IT Polymerization catalysts

(ring-opening, **magnesium oxide**, silicon- and barium-contg., for alkylene oxides)

IT 1304-28-5, Barium oxide (BaO), uses 1309-48-4,

Magnesium oxide, uses 11126-22-0, Silicon oxide

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for ethoxylation of alcs. by oxirane)

IT 9002-92-0P

RL: IMF (Industrial manufacture); PREP (Preparation)

(prepn. of, ethoxylation catalysts for)

L5 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1991:494207 CAPLUS

DN 115:94207

ED Entered STN: 06 Sep 1991

TI Multi-functional additives (MFA's) as optimizers in rubber formulation design

AU Hepburn, Claude; Halim, Massan H.; Mahdi, Mauaid S.

CS Inst. Polymer Technol. Mater. Eng., Loughborough Univ. Technol., Loughborough, UK

SO Kautschuk Gummi Kunststoffe (1990), 43(9), 794-809

CODEN: KGUKAC; ISSN: 0022-9520

DT Journal

LA English

CC 39-9 (Synthetic Elastomers and Natural Rubber)

AB The title discussion focuses on the effect of MFA's on carbon black- or silica-filled natural rubber, natural rubber-SBR, and natural rubber-butyl rubber compns. MFA's affect good flow during processing of uncured mixes, good release from mill rolls and mold release, acceleration of vulcanization, and superior filler **dispersion**. The effect of MFA's as

ST curing agents for chloroprene rubber is also discussed.

IT multifunctional additive rubber property optimization

Rubber, butadiene-styrene, uses and miscellaneous

Rubber, butyl, uses and miscellaneous

Rubber, natural, uses and miscellaneous

RL: USES (Uses)
(cationic **surfactants** as multifunctional additives for, optimization of formulation by)

IT Vulcanization accelerators and agents
(cationic **surfactants**, contg. **metal oxides**, for chloroprene)

IT Dispersing agents

Lubricants
(cationic **surfactants**, for rubber compds.)

IT Coupling agents
(for tire tread compns., cationic **surfactants** as synergistic agents in)

IT Carbon black, uses and miscellaneous

RL: USES (Uses)
(rubber compds. filled with, cationic **surfactant** multifunctional additives for, processing in relation to)

IT **Surfactants**
(cationic, multifunctional additives, optimization of rubber formulation by)

IT Tires
(treads, cationic **surfactants** as synergistic agents for coupling compds. in)

IT 1309-48-4, Magnesium oxide, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)
(catalysts, contg. zinc oxide and cationic **surfactants**, for vulcanization of chloroprene)

IT 109-76-2D, 1,3-Propanediamine, N-tallow derivs. 4253-76-3 5538-95-4
7173-60-6, N-Palmityl-1,3-propanediamine 7173-62-8, N-Oleyl-1,3-propanediamine 37926-81-1, 1,3-Propanediamine dioleate 37926-81-1D, N-tallow derivs. 61996-69-8, 1,3-Propanediamine distearate 61996-69-8D, N-tallow derivs. 71187-18-3, 1,2-Propanediamine dioleate 85557-21-7, 1,3-Propanediamine oleate 99739-95-4, 1,3-Propanediamine stearate 99739-96-5, 1,2-Propanediamine distearate 107140-26-1

RL: USES (Uses)
(multifunctional additives, for optimization of rubber formulation)

IT 7631-86-9, Silica, uses and miscellaneous

RL: USES (Uses)
(rubber compds. filled with, cationic **surfactant** multifunctional additives for, processing in relation to)

IT 9003-55-8 9010-85-9

RL: USES (Uses)
(rubber, cationic **surfactants** as multifunctional additives for, optimization of formulation by)

IT 1314-13-2, Zinc oxide, uses and miscellaneous

RL: USES (Uses)
(vulcanization of rubber compds. in presence of multifunctional additives retarded by)

L5 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full	Citing
Text	References

AN 1990:557537 CAPLUS
 DN 113:157537
 ED Entered STN: 27 Oct 1990
 TI Zirconium oxide fine powder and its preparation
 IN Takahashi, Hiroyuki; Konno, Norijiro
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C01G025-00
 CC 57-2 (Ceramics)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>JP 02137728</u>	A2	19900528	<u>JP 1988-291240</u>	19881118
<u>PRAI JP 1988-291240</u>		19881118		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 02137728	ICM	C01G025-00

AB A fine ZrO₂ powder contg. oxides of Ca, Mg, Y, and lanthanides is prep'd. by mixing Zr alkoxide and ≥1 of alkoxides of the metals with **surfactants**, water, nonpolar org. solvent, and optionally alkanol, and hydrolyzing the alkoxides. The **metal oxides** are stabilizers for zirconia-based ceramics and are dispersed uniformly in the zirconia powder. NP-6 (ethylene glycol nonylphenyl ether), Zr(OBu)₄, Ca(OBu)₂ were mixed in cyclohexane and the resulting soln. was hydrolyzed to give a granular powder useful as a raw material for ZrO₂-based ceramics.

ST zirconia powder alkoxide hydrolysis ceramic; stabilizer **metal oxide dispersion** ceramic

IT Surfactants

(**metal oxide**-contg. zirconia powder prepn. from zirconium alkoxide and metal alkoxide and, for zirconia ceramics)

IT Rare earth oxides

RL: SPN (Synthetic preparation); PREP (Preparation) (zirconia powder contg., prepn. of, for zirconia-based ceramics)

IT Ceramic materials and wares

(zirconia powder prepn. for, contg. **metal oxide** stabilizers)

IT Alcohols, compounds

RL: SPN (Synthetic preparation); PREP (Preparation) (metal salts, stabilizers, in zirconia powder prepn.)

IT Alcohols, compounds

RL: SPN (Synthetic preparation); PREP (Preparation) (zirconium salts)

IT 51287-43-5, Calcium dibutoxide

RL: USES (Uses) (**calcium oxide**-contg. zirconia powder prepn. from zirconium alkoxide and, for zirconia-based ceramics)

IT 15921-15-0, Magnesium dibutoxide

RL: USES (Uses) (**magnesium oxide**-contg. zirconia powder prepn. from zirconium alkoxide and, for zirconia-based ceramics)

IT 37318-80-2, Sulfanol NP 6

RL: USES (Uses) (**metal oxide**-contg. zirconia powder prepn. from zirconium alkoxide and metal alkoxide and, for zirconia ceramics)

IT 1314-23-4P, Zirconia, preparation

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of powd., contg. **metal oxide** stabilizer, by hydrolysis of zirconium alkoxide and metal alkoxide)

IT 7440-65-5D, Yttrium, alkoxides

RL: USES (Uses) (yttrium oxide-contg. zirconia powder prepn. from zirconium alkoxide and, for zirconia-based ceramics)

L5 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1990:181442 CAPLUS

DN 112:181442

ED Entered STN: 12 May 1990
 TI The interaction between pigment and **surfactant**
 AU Meguro, Kenjiro
 CS Inst. Colloid Interface Sci., Sci. Univ. Tokyo, Tokyo, Japan
 SO Fatipec Congress (1988), Vol. I(19th), 49-63
 CODEN: FAPVAP; ISSN: 0430-2222
 DT Journal
 LA English
 CC 42-6 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 66
 AB The interaction between some **metal oxide** sols and **surfactants** is described as factors of hydrophobic coagulation and redispersion of the hydrophobic coagulates by **surfactant** bilayers, and the mechanism of pigment **dispersion** is explained based on these interactions. Mechanisms of flocculation and redispersion are explained in terms of 2-fold **dispersion** layers.
 ST interaction **dispersion** pigment **surfactant**
 IT **Surfactants**
 (**dispersion** of pigments in aq. systems in presence of)
 IT Pigments
 (**dispersion** of, in aq. systems, **surfactant** effect on)
 IT 9003-02-5, Acrylic acid-potassium acrylate copolymer 25322-68-3,
 Polyethylene oxide 89699-20-7
 RL: USES (Uses)
 (**dispersion** of pigments in aq. systems in presence of)
 IT 151-21-3, SDS, properties
 RL: PRP (Properties)
 (**dispersion** of pigments in aq. systems in presence of)
 IT 1332-37-2, Iron oxide, uses and miscellaneous
13463-67-7, Titanium dioxide, uses and miscellaneous
 RL: USES (Uses)
 (pigments, **dispersion** of, in aq. systems, **surfactant** effect on)
 IT 9003-53-6P, Polystyrene
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, in aq. pigment **dispersions**, **surfactant** effect on)

L5 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1989:216357 CAPLUS
 DN 110:216357
 ED Entered STN: 10 Jun 1989
 TI Fuel-cell electrodes
 IN Maoka, Tadanori
 PA Toshiba Corp., Japan
 SO Jpn. Kokai Tokyo Koho, 3 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM H01M004-96
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>JP 01048372</u>	A2	19890222	<u>JP 1987-203079</u>	19870817
<u>PRAI JP 1987-203079</u>		19870817		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 01048372	ICM	H01M004-96

AB In conductive, porous carbon electrodes having grooves for gas passages on

1 side and coated with a layer of noble metal catalyst-C-fluoropolymer dispersion on the other side, the dispersion contains fine particles of metal oxides. Thus, an aq. dispersion of carbon loaded with 0.6 g Pt, PTFE, a nonionic surfactant, and 0.1 g ZnO was filtered and applied on a porous C substrate, and baked at 340° for 20 min in N to obtain an electrode. When used as an O cathode, this electrode had a voltage 10-mV higher than an electrode without ZnO in a half cell using 105% H₃PO₄ electrolyte at 190°.

ST fuel cell electrode catalyst layer; zinc oxide electrode catalyst layer; magnesium oxide electrode catalyst layer; calcium oxide electrode catalyst layer

IT Electrodes

(fuel-cell, catalytic, metal oxides powder in catalyst dispersions for manuf. of)

IT 1305-78-8, Calcium oxide, uses and miscellaneous
1309-48-4, Magnesium oxide, uses and miscellaneous

1314-13-2, Zinc oxide, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)
(catalyst mixts. contg., for improved dispersion, in manuf.
of electrodes for fuel cells)

L5 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1979:114159 CAPLUS

DN 90:114159

ED Entered STN: 12 May 1984

TI Magnetic metal oxide powders with improved surface properties

IN Miyake, Akira; Watatani, Seiji

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C01B013-14

CC 77-3 (Magnetic Phenomena)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53134796	A2	19781124	JP 1977-49159	19770428
	JP 61001373	B4	19860116		
PRAI	JP 1977-49159		19770428		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 53134796 IC C01B013-14

AB A dispersion contg. magnetic metal oxide powder and metal adsorbed on the magnetic powder surface is prep'd., then an anionic surfactant is added to the dispersion, and the powder is sepd. from the dispersion and dried to give magnetic powder with improved surface properties. Thus, FeCl₃ 0.01 mol/L was dissolved in an HOAc soln. (pH = 4.0), then γ-Fe₂O₃ powder 30 g was dispersed in the soln. (300 mL), a 20 nmol/L Na dodecylbenzenesulfonate soln. 300 mL was added to the dispersion; the dispersion was then mixed well with PhMe, and γ-Fe₂O₃ powder extd. into the PhMe phase was dried to give γ-Fe₂O₃ powder having improved dispersibility in the resin binder for a magnetic tape.

ST iron oxide magnetic powder

IT Magnetic substances

(iron oxide powder, with surface property improvement)

IT 1309-37-1, properties

RL: PRP (Properties)

(magnetic powder, with surface property improvement)

L5 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full	Citing
Text	References

AN 1976:75426 CAPLUS
 DN 84:75426
 ED Entered STN: 12 May 1984
 TI **Metal oxide** paste **dispersions** and their use as curing agents
 IN Vickery, Glenn C.
 PA Basic Inc., USA
 SO U.S., 12 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC C08K
 NCL 260028500B
 CC 38-10 (Elastomers, Including Natural Rubber)
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>US 3923712</u>	A	19751202	<u>US 1973-388580</u>	19730815
	<u>US 3850845</u>	A	19741126	<u>US 1973-354339</u>	19730425
PRAI	<u>US 1973-354339</u>			19730425	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3923712	IC C08K	NCL 260028500B

AB Paste **dispersions** of MgO [1309-48-4], ZnO [1314-13-2], a nonaq. liq. vehicle, and a **surfactant** are useful as vulcanizing agents for halogen-contg. rubbers, e.g. neoprene. Thus, 6 parts of a paste prep'd. by mixing MgO 52, ZnO 17.9, Protop 169 01, sorbitan trioleate [26266-58-0] 1, microcrystn. wax 4, and Sunthene 4240 [52932-81-7] 25, feeding through a colloid mill, and extruding, was mixed with Neoprene GNA 100, steric acid 0.5, Neozone A 2, and SRF black 29 to give a stock having min. torque 3.7, scorch time 7.7, optimum cure time 16.4, optimum cure torque 32.5, and max. torque 36 (oscillating disk remometer 121°, 1° arc 100 cycles) compared with 5, 6.3, 11.2, 35, and 38, resp., for a stock conventionally mixed with 4 parts MgO and 5 parts ZnO.

ST neoprene rubber vulcanization agent; **magnesium oxide** paste vulcanization; zinc oxide paste vulcanization; **surfactant** vulcanization paste; naphthenic oil vulcanization paste; paraffin wax vulcanization paste

IT Naphthenic oils

Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous
 RL: USES (Uses)

(**magnesium oxide**-zinc oxide pastes contg., for
 vulcanization of neoprene rubbers)

IT Vulcanizing agents

(**magnesium oxide**-zinc oxide pastes, for neoprene
 rubber)

IT **Surfactants**

(sorbitan oleates, **magnesium oxide**-zinc oxide
 pastes contg., for neoprene rubber vulcanization)

IT Rubber, neoprene, uses and miscellaneous

(vulcanizing agents for, **magnesium oxide**-zinc oxide
 paste as)

IT 1338-43-8 26266-58-0

RL: USES (Uses)

(**surfactants**, for **magnesium oxide**-zinc
 oxide vulcanization pastes for neoprene rubber)

IT 1309-48-4, uses and miscellaneous

RL: USES (Uses)

(vulcanization pastes, contg. zinc oxide, for neoprene rubber)

IT 1314-13-2, uses and miscellaneous
 RL: USES (Uses)
 (vulcanizing pastes, contg. **magnesium oxide**, for
 neoprene rubber)

L5 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1976:24427 CAPLUS
 DN 84:24427
 ED Entered STN: 12 May 1984
 TI Photosensitive material for printed circuits
 IN Lippits, Gerardus J. M.; Debruijn, Henricus A.; Janssen, Petrus J.; Van Ruler, Johannes
 PA N. V. Philips' Gloeilampenfabrieken, Neth.
 SO Ger. Offen., 13 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC H01B
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>DE 2454536</u>	A1	19750605	<u>DE 1974-2454536</u>	19741116
	<u>NL 7316313</u>	A	19750602	<u>NL 1973-16313</u>	19731129
	<u>SE 7414805</u>	A	19750530	<u>SE 1974-14805</u>	19741126
	<u>SE 404558</u>	C	19790118		
	<u>SE 404558</u>	B	19781009		
	<u>JP 50085876</u>	A2	19750710	<u>JP 1974-135259</u>	19741126
	<u>JP 56007219</u>	B4	19810217		
	<u>GB 1487227</u>	A	19770928	<u>GB 1974-51132</u>	19741126
	<u>AT 7409459</u>	A	19810115	<u>AT 1974-9459</u>	19741126
	<u>AT 363540</u>	B	19810810		
	<u>BE 822669</u>	A1	19750527	<u>BE 1974-150920</u>	19741127
	<u>FR 2253229</u>	A1	19750627	<u>FR 1974-38987</u>	19741128
	<u>FR 2253229</u>	B1	19790525		
	<u>JP 55130197</u>	A2	19801008	<u>JP 1979-158750</u>	19791208
	<u>JP 57048879</u>	B4	19821019		
PRAI	<u>NL 1973-16313</u>		19731129		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

DE 2454536 IC H01B

AB In the process of Neth. 67 12,933 (CA 71: 43593d), where the photoreaction product of a semiconductive **metal oxide** liberates Cu or a nobler metal from their salt solns., the resinous binder for the oxide can be omitted if a **dispersion** of <0.5 μ TiO₂ particles of pH 2-4 is used in which the TiO₂ carries a charge of opposite polarity to that of the substrate's surface. The pattern of liberated metal centers is intensified to a conductive unit by a phys. developer or electroless plating. Holes in the printed circuit can be rendered conductive in the same manner, by wetting with the **dispersion**, heating >50°, light-exposure, and development. Thus, a glass plate was immersed in a 2-5% aq. **dispersion** of TiO₂ (Degussa P 25), adjusted with HCl to pH 3. The plate was rinsed, dried, and treated with a mixt. of PdCl₂ 2 g, 37% HCl 20 ml, glycerol 1%, and Tensagex (anionic **surfactant**) 0.4%. The dried plate was exposed through a neg. to a 125-W high-pressure Hg lamp at 30 cm for 30 sec, rinsed 1 min to remove unexposed PdCl₂, and plated for 2 min in a soln. contg. CuSO₄, EDTA tetra-Na salt, NaOH, and HCHO. The Cu pattern adhered very well to the glass plate.

ST photosensitive **titanium oxide** elec circuit

IT Photography

(photosensitive compns. contg. noble metal salt and titanium dioxide

IT dispersion for, for printed elec. circuit prepn.)
 IT Electric circuits
 (printed, photosensitive compns. contg. noble metal salt and titanium dioxide aq. dispersion for image formation in prepn. of)
 IT Photographic emulsions
 (silver-free, contg. noble metal salt and titanium dioxide dispersion for printed circuit prepn.)
 IT Epoxy resins
 RL: PREP (Preparation)
 (supports, for photosensitive compns. contg. palladium chloride and titanium dioxide aq. dispersion for printed elec. circuit prepn.)
 IT Iron yttrium oxide (Fe5Y3O12), solid soln. with gadolinium iron oxide
 RL: PREP (Preparation)
 (supports, for phohtosensitive compns. contg. palladium chloride and titanium dioxide aq. dispersion for printed elec. circuit prepn.)
 IT Barium oxide, solid soln. with titanium dioxide and zirconium oxide
 Gadolinium iron oxide (Gd3Fe5O12), solid soln. with iron yttrium oxide
 Titanium oxide (TiO2), solid soln. with barium oxide and zirconium oxide
 Zirconium oxide (ZrO2), solid soln. with barium oxide and titanium dioxide
 RL: PREP (Preparation)
 (supports, for photosensitive compns. contg. palladium chloride and titanium dioxide aq. dispersion for printed elec. circuit prepn.)
 IT 7647-10-1
 RL: USES (Uses)
 (photosensitive compns. contg. aq. titanium dioxide dispersion and, for printed elec. circuit prepn.)
 IT 13463-67-7, uses and miscellaneous
 RL: USES (Uses)
 (photosensitive compns. contg. palladium chloride and aq. dispersion of, for printed elec. circuit prepn.)
 IT 1344-28-1, uses and miscellaneous
 RL: USES (Uses)
 (supports, for photosensitive compns. contg. palladium chloride and titanium dioxide aq. dispersion for printed elec. circuit prepn.)

L5 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1975:172358 CAPLUS
 DN 82:172358
 ED Entered STN: 12 May 1984
 TI Metal oxide paste dispersions as curing agents
 IN Vickery, Glenn C.
 PA Basic Inc., USA
 SO U. S. Publ. Pat. Appl. B, 12 pp. Avail. US Pat. Trademark Off.
 CODEN: USXXDP
 DT Patent
 LA English
 IC C08F
 NCL 260028500B
 CC 38-10 (Elastomers, Including Natural Rubber)
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 388580	A1	19750128	US 1973-388580	19730815

US 3850845 A 19741126 US 1973-354339 19730425
 PRAI .US 1973-354339 19730425

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 388580	IC C08F	NCL 260028500B

AB MgO [1309-48-4]-ZnO [1314-13-2] pastes in a mineral oil vehicle and a **surfactant** used as vulcanizing agents for halogen-contg. rubbers allow addn. of ZnO at the beginning of mixing giving uniform **dispersions**, reduce the amt. of oxide required, allow one-pass mixing, improve stock properties, and reduce hydration problems. For example, a neoprene rubber compn. cured with a paste contg. MgO 40, ZnO 35, sorbitan monooleate [1338-43-8], microcryst. wax 3, and Sunthene 4240 naphthenic oil 21 had scorch time 8.8 min, optimum cure time 13.7 min, optimum cure torque 20, max. torque 22, and Mooney scorch (T5 at 121°) 64.0 min compared with a Mooney scorch of 40 min for a stock with MgO and ZnO added in powd. form.

ST **magnesium oxide** paste vulcanization; zinc oxide paste vulcanization; neoprene rubber vulcanization

IT Naphthenic oils

RL: USES (Uses)

(**magnesium oxide-zinc oxide dispersions**
in, vulcanizing agents)

IT Vulcanizing agents

(**magnesium oxide-zinc oxide-sorbitan oleate pastes,**
for neoprene rubber)

IT **Surfactants**

(sorbitan oleates, for **magnesium oxide-zinc oxide**
paste vulcanizing agents)

IT Rubber, neoprene, uses and miscellaneous

(vulcanizing agents for, **magnesium oxide-sorbitan**
oleate-zinc oxide pastes as)

IT 1338-43-8 26266-58-0

RL: USES (Uses)

(**surfactants**, for **magnesium oxide-zinc**
oxide paste vulcanizing agents)

IT 1314-13-2, uses and miscellaneous

RL: USES (Uses)

(vulcanizing agents, contg. **magnesium oxide**, for
neoprene rubber)

IT 1309-48-4, uses and miscellaneous

RL: USES (Uses)

(vulcanizing agents, contg. zinc oxide, for neoprene rubber)

L5 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1975:99721 CAPLUS

DN 82:99721

ED Entered STN: 12 May 1984

TI **Metal oxide** paste **dispersions** and use as curing agents

IN Vickery, Glenn C.

PA Basic, Inc.

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

IC B01J

NCL 252430000

CC 38-9 (Elastomers, Including Natural Rubber)

FAN.CNT 3

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

<u>PI</u>	<u>US 3850845</u>	A	19741126	<u>US 1973-354339</u>	19730425
	<u>US 388580</u>	A1	19750128	<u>US 1973-388580</u>	19730815
	<u>US 3923712</u>	A	19751202	<u>US 1973-388580</u>	19730815
	<u>DE 2348735</u>	A1	19741121	<u>DE 1973-2348735</u>	19730928
	<u>DE 2348735</u>	B2	19800327		
	<u>FR 2227039</u>	A1	19741122	<u>FR 1973-35003</u>	19731001
	<u>JP 50003447</u>	A2	19750114	<u>JP 1973-110234</u>	19731002
	<u>JP 52019575</u>	B4	19770528		
	<u>CA 1012685</u>	A1	19770621	<u>CA 1973-182457</u>	19731002
	<u>AU 7360997</u>	A1	19750410	<u>AU 1973-60997</u>	19731004
	<u>BE 805738</u>	A1	19740201	<u>BE 1973-136406</u>	19731005
	<u>IT 999624</u>	A	19760310	<u>IT 1973-69935</u>	19731005
	<u>NL 7314667</u>	A	19741029	<u>NL 1973-14667</u>	19731025
	<u>GB 1398695</u>	A	19750625	<u>GB 1973-55726</u>	19731130
	<u>ES 422053</u>	A1	19760416	<u>ES 1974-422053</u>	19740105
	<u>SE 7404154</u>	A	19741213	<u>SE 1974-4154</u>	19740327
	<u>SE 446342</u>	B	19860901		
	<u>SE 446342</u>	C	19861211		
	<u>DK 147919</u>	B	19850107	<u>DK 1974-1719</u>	19740328
	<u>DK 147919</u>	C	19850722		
	<u>BR 7403134</u>	A0	19741203	<u>BR 1974-3134</u>	19740419
	<u>JP 52000842</u>	A2	19770106	<u>JP 1976-66648</u>	19760609
	<u>JP 56022463</u>	B4	19810525		
	<u>JP 55069633</u>	A2	19800526	<u>JP 1979-119179</u>	19790917
<u>PRAI</u>	<u>MX 1973-354339</u>		19730425		
	<u>US 1973-354339</u>		19730425		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 3850845	IC	B01J
	NCL	252430000

AB The processability and storage stability of neoprene rubber compn. contg. MgO [1309-48-4] and ZnO [1314-13-2] was improved by addn. of MgO and ZnO as a paste with sorbitan monooleate (I) [1338-43-8] or sorbitan trioleate [26266-58-0], microcryst. or castor wax, and Sunthene 4240 (II) [52932-81-7] (mineral oil). Thus, a compn. contg. neoprene rubber (GNA140P), stearic acid, and a MgO-ZnO-I-microcryst. wax-II mixt. had Mooney scorch time 64.0min (T5 at 121°) compared with 40 min for a GNA 140P-stearic acid-MgO-ZnO compn., in which the MgO and the ZnO were added in the given order in powder form.

ST scorch resistance neoprene rubber; processability neoprene rubber vulcanizates; storage stability neoprene rubber; zinc oxide neoprene rubber; magnesia neoprene rubber

IT Waxes and Waxy substances

RL: USES (Uses)

(castor, **magnesium oxide**-zinc oxide pastes contg., for improved processability in neoprene rubber compns.)

IT Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous

RL: USES (Uses)

(**magnesium oxide**-zinc oxide pastes contg., for improved processability in neoprene rubber compns.)

IT Vulcanizing agents

(**magnesium oxide**-zinc oxide-mineral oil-surfactant-wax pastes, for neoprene rubber compns.)

IT Oils

RL: USES (Uses)

(mineral, **magnesium oxide**-zinc oxide pastes contg., for improved processability in neoprene rubber compns.)

IT **Surfactants**

(sorbitan oleates, **magnesium oxide**-zinc oxide pastes contg., for improved processability in neoprene rubber compns.)

IT Rubber, neoprene, uses and miscellaneous

(vulcanizing agents for, **magnesium oxide**-zinc oxide-mineral oil-surfactant-wax pastes as)

IT 52932-81-7
 RL: USES (Uses)
 (oils, **magnesium oxide**-zinc oxide pastes contg.,
 for improved processability in neoprene rubber compns.)

IT 1338-43-8 26266-58-0
 RL: USES (Uses)
 (**surfactants**, **magnesium oxide**-zinc oxide
 pastes contg., for improved processability in neoprene rubber compns.)

IT 1314-13-2, uses and miscellaneous
 RL: USES (Uses)
 (vulcanizing agents, pastes of **magnesium oxide** and,
 contg. mineral oil, **surfactants** and waxes, for improved
 processability in neoprene rubber compns.)

IT 1309-48-4, uses and miscellaneous
 RL: USES (Uses)
 (vulcanizing agents, pastes of zinc oxide and, contg. mineral oil,
surfactants and waxes, for improved processability in neoprene
 rubber compns.)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	154.21	154.42
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-26.46	-26.46

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 FILE LAST UPDATED: 17 Aug 2004 (20040817/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.46	154.88
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CA SUBSCRIBER PRICE	0.00	-26.46

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